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ABSTRACT

This curriculum guide suggests activities and educational experiences within a Hawaiian cultural context for Grade 2 students in Hawaiian schools. First, an introduction discusses the contents of the guide; the relationship of the classroom teacher and the kupuna (Hawaiian-speaking elder); the identification and scheduling of kupunas; and how to use the guide. The remainder of the text is divided into two major units. Each is preceded by an overview which outlines the subject areas into which Hawaiian Studies instruction is integrated; the emphases or major lesson topics taken up within each subject area; the learning objectives addressed by the instructional activities; and a key to the unit's appendices, which provide cultural information to supplement the activities. In Unit I, the activities focus on an in-depth study of the characteristics of the community and the interdependence within the community. The children are asked to investigate and familiarize themselves with community helpers, the goods and services they provide, and how life in the community today is similar to or different from that of an earlier Hawaii. In Unit II, the activities center on factors involved in community living. The children are asked to study natural resources, their availability and importance in the life of the community, and people's influence on the use and management of natural resources in the community. General appendices include a basic Hawaiian vocabulary, a bibliography, and an index to songs and chants cited in the main text. (KH)

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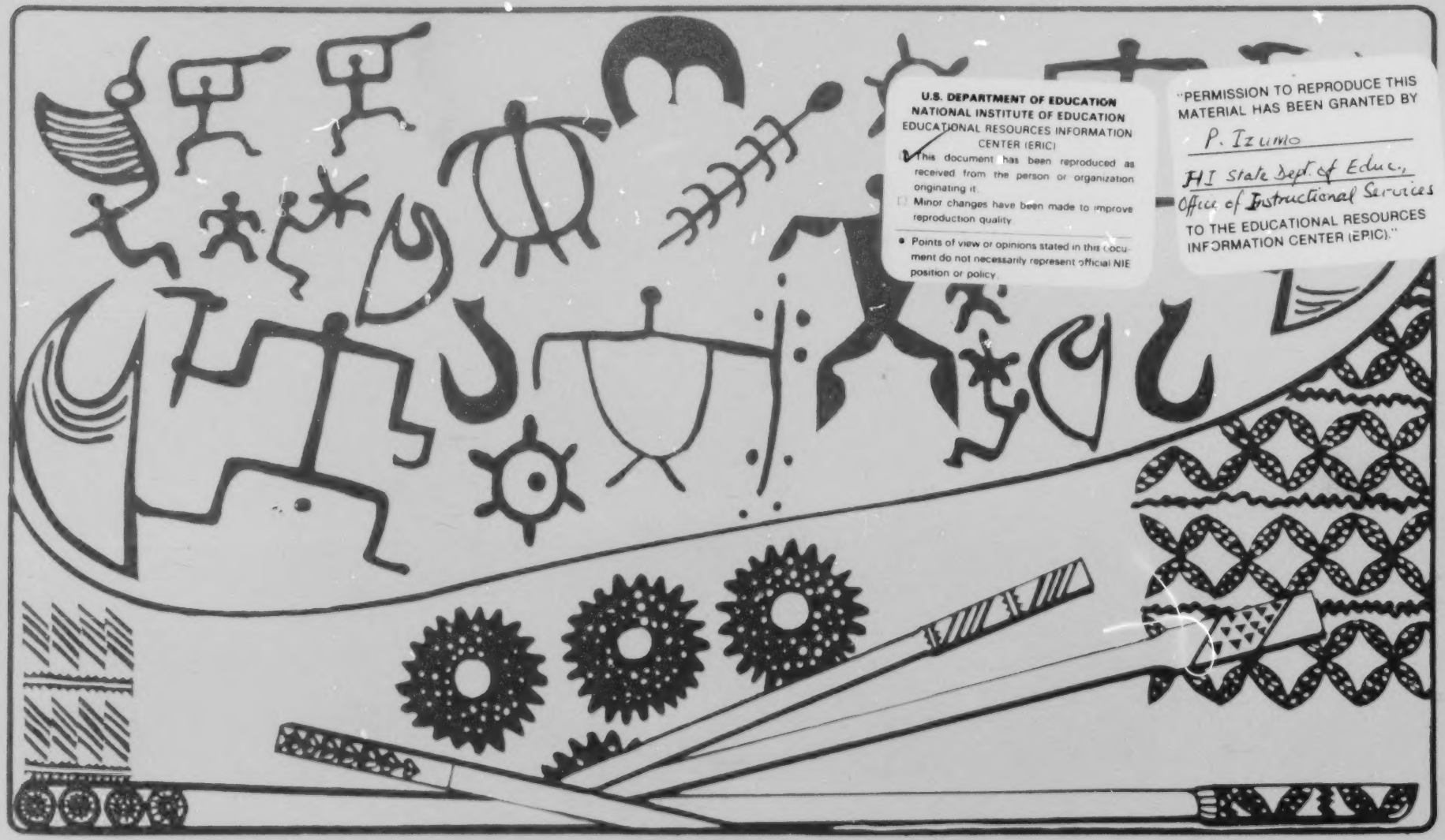
Hawaiian Studies Curriculum Guide



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Office of Instructional Services/General Education Branch • Department of Education
State of Hawaii • RS 84-6137 • May 1984

GRADE 2

The Honorable George R. Ariyoshi
Governor, State of Hawaii

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HAWAIIAN STUDIES CURRICULUM GUIDE, GRADE 2

EVALUATION FORM

(Photocopies may be used.)

Name (optional): _____
School/Office: _____
Grade/Subjects Taught: _____
Date: _____

Aloha kākou! As users of this Curriculum Guide or as persons interested in the direction which the Hawaiian Studies Program will take over the next few years, you are being asked to kōkua state OIS Hawaiian Studies Program staff by taking the time to fill out this evaluation form and sending it back to the address given above.

We ask that you not make an evaluation of this guide until you have actually had a chance to use it as designed in conjunction with the kōkua of a native speaker kupuna. In an effort such as this, it is inevitable that some aspect of the curriculum could be overlooked, whether it be content details, techniques for presenting a lesson, proper references for something which seemed commonplace to the curriculum developers or a certain appendix which you might feel should be included. Please forgive the oversight and help us by calling it or them to our attention through this form. Mahalo nui loa for your kōkua and your consideration!

A. In this section, please circle the rating number which is the most appropriate. Comments may be added in the margin. Rating should be made on a scale of 1 to 5: 1-Strongly Agree, 2-Agree, 3-Undecided/No Opinion, 4-Disagree and 4-Strongly Disagree.

	SA	A	U	D	SD	Comments
1. The open-page format displaying all subject areas through which the Learner Objectives are to be integrated made it easy to use.	1	2	3	4	5	
2. The size of the document is comfortable to use.	1	2	3	4	5	
3. The overviews for the Grade levels/Units were helpful.	1	2	3	4	5	
4. In general, the appendices provided most of the teacher information that I needed to execute the plans successfully.	1	2	3	4	5	
5. In general, the work planned for Grade 2 is too easy.	1	2	3	4	5	
6. The Learner Objectives from the Hawaiian Studies Program Guide were easy to locate in the overviews of each unit.	1	2	3	4	5	

(Continued next page)

EVALUATION FORM

B. In this section, please feel free to expand upon your critique, comments and suggestions. Additional sheets may be attached.

Unit I: 'Ohana in the Community

Unit II: Community Environment and Lifestyle

Vocabulary Lists:

Other Comments:

FOREWORD

The Department of Education is pleased to present this Hawaiian Studies Curriculum Guide, Grade 2 to teachers, kūpuna and other interested parties who are working toward fulfilling the mandate of the State Constitution that a Hawaiian education program be established within the Department which provides for the study of Hawaiian culture, history and language.

Whereas the fourth grade has long been the level at which study of the indigenous Hawaiian culture was carried out, the Department wishes to integrate study about Hawai'i into our various subject areas at all levels of the curriculum. In the lower elementary grades, teachers and kupuna are to provide our students with educational experiences and activities which help them to understand the self, the 'ohana (family) and the community within our contemporary Hawaiian environment. The educational activities incorporated in this guide were developed in accordance with the objectives of the Hawaiian Studies Program Guide for this grade. This guide includes certain revisions of the draft guide for grades K-3 which appeared in September 1981. That draft guide is now considered inappropriate and should not be used since work with new objectives in Primary Education Curriculum over the past several years has resulted in a restructuring of much of the material in the original draft document and the addition of much new material designed to integrate the focus of study of the family and its place within the community into a contemporary context applicable to all of our students in the public elementary schools.

Many of the activities contained herein are designed for collaborative use by regular classroom teachers and our beloved kūpuna. These may deal with aspects of study concerning the Hawaiian language, stories or tales about people or events related to the students' immediate locale and environment, the use of Hawaiian cultural skills still practiced by members of our Hawaiian and general communities such as gathering limu or preparing various local foods, the singing of Hawaiian and hapa-Haole songs relating to the 'ohana and the communities of Hawai'i, dance and other movement related to our Hawaiian environment and other physical and intellectual activities integrating Hawaiian studies into the regular lower elementary curriculum.

Teachers who do not currently enjoy the regular services of kūpuna should be aware that this guide was designed with them in mind also since most of the Hawaiian studies activities can easily be presented by our professionals using the detailed lesson plans and supplementary materials contained in the guide. Training in the use of this guide and in the collaborative relationship between teacher and kupuna is available from district and state staff upon request and at certain planned intervals during the year. Such training and the production of this guide are just a part of the effort being made by the Department to fulfill and support the mandate of the Constitution as it relates to a Hawaiian education program.

Francis M. Hatanaka

Francis M. Hatanaka
Superintendent of Education

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The following Educational Specialists/State Office Teachers in the Office of Instructional Services who reviewed and critiqued the material in this guide and who provided invaluable suggestions:

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Mr. Miles Muraoka, Science Education

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All of the teachers, kūpuna and administrators who used the original draft document published in September 1981 and who shared their mana'o (evaluations) with the developers.

INTRODUCTION

The Hawaiian Studies Program Guide was written in response to the 1978 Constitutional Amendment which mandates that "the State shall promote the study of Hawaiian culture, history and language." (Article X, Section 4) The total elementary school program is described in the program guide with learner objectives for each grade level, K-6. The Learner Objectives were developed from Part I and Part II Performance Expectations (PEs) which are found in Student Performance Expectations of the Foundation Program, RS78-6054, August 1978, Office of Instructional Services.

While elements of the Hawaiian Studies Program apply to each of the eight Foundation Program Objectives (FPOs), those FPOs most critically addressed by the program include:

FPO II	Develop positive self-concept
FPO III	Develop decision-making and problem-solving skills
FPO V	Develop physical and emotional health
FPO VII	Develop a continually growing philosophy that reflects responsibility to self as well as to others
FPO VIII	Develop creative potential and aesthetic sensitivity

This Hawaiian Studies Curriculum Guide, Grade 2 has been designed to provide suggested activities and educational experiences within a Hawaiian cultural context which will help each student to develop an understanding of the 'ohana (family) and its relationship to the community in an upward spiraling continuum.

This continuum takes the child through an ever-enlarging study of self, self within the immediate 'ohana (family), the immediate 'ohana within the extended 'ohana-type lifestyle enjoyed by many of our students from different ethnic backgrounds, the 'ohana within the local community and, finally in Grade 3, the local community in comparison to communities throughout Hawai'i and the world.

The Department intends that children in the lower elementary grades learn about Hawaiian culture as it has survived into this modern age around us. Since many of these children in grades K-3 cannot differentiate between events taking place in a time frame of two hundred years ago and those of a year or two ago, it was decided to delay the study of early Hawaiian life until their sense of chronology and history reached a certain level of development. Therefore, it is not until the fourth grade that Hawaiian culture of the pre-European contact era is studied in great detail. This is consistent with the social studies curriculum for that grade level and serves to lessen any disruption to the established curriculum that the introduction of the integrated Hawaiian Studies curriculum might pose.

Students in the fifth and sixth grades study U.S. history and world cultures respectively in their social studies classes. In Hawaiian Studies, students in the fifth grade have an opportunity to contrast their U.S. history study with a parallel study of Hawai'i during the same era. The four units cover Migration; Comparative Culture; Outsiders/Diseases/Immigration; and Hawaiian Poetry, Music and Dance. Hawai'i is a part of the United States and is studied as such. In the sixth grade, the students have an opportunity to study various cultures of the world in a pan-pacific perspective and the relationship of these cultures to Hawaiian culture. The other two important units of study at this grade level focus on the important resources, ka wai (fresh water) and ka 'āina (the land).

In this curriculum guide for grade 2, the focus of Unit I is on the 'ohana (family) and its relationship to the larger community. The children are actively involved in activities that explore the roles of family members and members of the immediate neighborhood. They study the interdependent nature of community living in the provision of goods and services to meet the needs and wants of people. They also have the opportunity to learn the meaning of Hawaiian street and place names in the community, learn some Hawaiian songs and hula appropriate to the study of their environment and practice the 'ohana concepts of living in their daily activities and interrelationships with others.

Unit II involves the children in a study of how people's lives are influenced by their physical location on earth and the availability of natural resources. The unit focuses on the effects of the environment on the community and the effects of humans on the environment; the influence of climate, land and natural resources on community life; the influence of the past on the present; and, the impact of the present on the future.

Instruction is to be carried out by the classroom teachers with the assistance of Hawaiian-speaking kūpuna (elders). These community resources have the expertise in Hawaiian culture, including language, and they are an essential element of the program at the elementary level. They are to teach Hawaiian language through an informal, culture-based aural-oral method of teaching incorporating lessons, topics, and plans developed collaboratively with the classroom teachers.

One major reason for hiring uncertificated community resources to teach in the public school classrooms is that these kūpuna possess expertise in Hawaiian language and other aspects of Hawaiian culture which complement the expertise of the classroom teacher in presenting a well-rounded and integrated program of study.

During training sessions, it is stressed to the kūpuna that they should structure their lessons based on ideas received from the teachers in collaborative planning sessions or through written communications if face-to-face meetings are difficult to arrange because of time constraints. They have the same curriculum guides used by the teachers and references to specific lessons and activities will help them to plan effective lessons which can be reinforced by the teacher during other instructional periods.

The General Appendices section of this guide contains the vocabulary lists for grades K-2 which were developed with the input of a number of program personnel. It is desirable that teachers and kūpuna structure their lessons so that these Hawaiian words are learned by the students before moving up to third grade. In general, active mastery of the words listed is expected unless it is noted that exposure is sufficient at this grade level.

Student mastery of Hawaiian vocabulary is just one aspect of the learner outcomes expected in the Hawaiian Studies Program. It is not necessarily a major aspect but it is one area in which cognitive learning gains can be measured through vocabulary tests at various grade levels.

Important affective domain aspects of the Hawaiian Studies Program to be addressed in grade 2 include:

Unit I: The 'Ohana in the Community

Hawaiian concepts of aloha (love/greetings); kōkua (help, support); olakino maika'i (good health, well being); 'ike (recognition, feelings, understanding); kūkākūkā (talking things over, reconciliation); pa'ahana (industriousness); alu like (pulling together); laulima (interdependence).

Unit II: Community Environment and Lifestyle

Hawaiian concepts of kuleana (responsibility, roles); kapu (rules, social control); alu like (social interaction, working together); hana (work); laulima (interdependence, cooperation); lōkahi (harmony in living); aloha 'āina (love for the land and the people living on it); mo'olelo and mo'okū'auhau (sense of history and genealogy); alaka'i (leadership).

There are many activities promoting these concepts provided to the teacher and kupuna through this curriculum guide. These are offered through an integrative, thematic approach so that the instructional activities can be carried out through a number of subject areas, addressing the concerns and performance expectations of the particular subject area and Hawaiian Studies at the same time.

These instructional activities have been reviewed and critiqued by the various educational specialists in the General Education Branch of the Office of Instructional Services whose valuable suggestions have strengthened the Hawaiian Studies curriculum presented here.

Since the Hawaiian Studies curriculum developers are aware, having been classroom teachers themselves, of the limited amount of time that classroom teachers have to do research in unfamiliar curriculum areas such as Hawaiian Studies, every attempt has been made to develop this guide with appendices which include pertinent readings and worksheets for teachers and students which are needed and helpful in presenting interesting and thought-provoking lessons. Much information has been included to help the teacher with background in various aspects of Hawaiian culture.

It should be noted that every attempt has been made to keep the content of this curriculum guide as free of sex-role bias as possible. However, roles defined by sex were an important and acceptable part of the society of the early Hawaiians and this may be seen in some of the stories, pictures or teacher reference materials. When appropriate, teachers may wish to point out such differences in early Hawaiian society and modern American society.

THE ROLE OF THE TEACHER IN THE HAWAIIAN STUDIES PROGRAM

The classroom teacher has the most important role in the implementation of the Hawaiian Studies Program in the classroom. Through the use of this guide and other resources, the teacher plays the key role in the integration of Hawaiian Studies curricular materials and instruction. A teacher is free to choose those activities in this guide that meet his/her expectations and plan accordingly. The kupuna is an important part of this teacher planning because the one hour instruction per week per class, which most kūpuna will be allotted, should be instruction that enriches the teacher's instructional activities.

It is the responsibility of the teacher to:

- provide instructional leadership to the kupuna in the classroom;
- work cooperatively with the kupuna to develop short- and long-range lesson plans based on the state's curriculum plans and the needs of the particular group of students;
- monitor the instruction of the kupuna in order to give the kupuna the benefit of the teacher's experience in lesson preparation, presentation and evaluation;
- participate in the instruction of the class in order to be able to follow up, review and reinforce those concepts, practices and vocabulary taught by the kupuna;
- assist the principal in the evaluation of the work of the kupuna;
- include, in the teacher's own instruction, those aspects of Hawaiian Studies as are presented in the curricular materials.

THE ROLE OF THE KUPUNA IN THE HAWAIIAN STUDIES PROGRAM

The kupuna (grandparent) has an important role in the Hawaiian Studies Program. Although a number of kūpuna teaching in the schools are over the state's mandatory retirement age for teachers, they have been accepted to work as Part-Time Teachers (PTT) at the current rate of compensation in this program because they represent within themselves the kinds of qualities and knowledge to which we want our students to have exposure.

Although some of the kūpuna are not readers nor writers of Hawaiian at a sophisticated level, and the majority of them did not complete their own secondary education, they nonetheless speak Hawaiian and have an education for living which they have picked up in their many decades of living in this Hawaiian environment. Most of them grew up in the households of their own kūpuna, learning to speak Hawaiian as a native language and participating in the kinds of Hawaiian practices which are now only available to our teachers through written descriptions in books.

Most of them have as part of their own psychological and cultural make-up the kinds of Hawaiian values which are the subject matter of the Affective Strand of the Hawaiian Studies Program. Obviously, then, the selection of bonafide kūpuna for a school is a very important responsibility of school/district personnel.

It is the responsibility of the kupuna in this program to:

- teach the Hawaiian language component of Hawaiian Studies;
- work closely with the classroom teacher in planning lessons which present Hawaiian language and culture to the students in accordance with the year-long plan of instruction of the teacher for the particular grade level;
- attend inservice training sessions in order to learn some of the skills needed for teaching in the public school classroom;
- plan, carry out and evaluate the kupuna's own instruction;
- work with the other kūpuna in the program to improve and expand cultural knowledge and Hawaiian language speaking ability on the part of all of the kūpuna;
- work cooperatively with the district and state personnel who are charged with managing the program.

COLLABORATION BETWEEN TEACHER AND KUPUNA

Teachers and kūpuna are asked to draw upon their own experience and common sense in deciding what elements of these curriculum plans should be presented to the students of a particular school and classroom. Readiness is the key. Most of the activities in grade 2 are not oriented to reading and writing and should therefore be practical even for immigrants who have limited English speaking abilities.

The Department's Hawaiian Studies Program seeks to give some validation and worth to the culture of the ancestors of many of the children in our public school system. It is hoped that the spark of motivation to learn through the academic system with the help of non-college trained teachers such as kupuna and other community persons, will grow in many of our students.

The program provides the opportunity for children to learn from kūpuna and kumu (teachers) and the kūpuna and kumu in turn to learn a great deal from one another and from their students and the students' families.

HAWAIIAN STUDIES PROGRAM ADMINISTRATIVE INFORMATION

Different school districts and communities located throughout the State of Hawai'i have varying needs and expectations relating to the Hawaiian Studies Program. Some of the factors affecting needs and expectations are the proportion of Hawaiians in the school population; the nature of the community, rural or urban; location of the school relative to the sea or to

Hawaiian agricultural sites; established Hawaiian areas versus newly developed subdivision areas; and, the interest of the school's faculty and administration in the program.

In some areas, qualified kūpuna may be abundantly available whereas in other areas administrators may not be sure where to begin looking. The following section is meant to provide some helpful suggestions on what to look for in a kupuna; where and how to identify and recruit kūpuna; a recommended interview and selection process; and, some points to consider when scheduling kūpuna instruction.

Criteria for Selection of Kūpuna

The criteria identified in the initial OIS/Hawaiian Studies "Training Plan - Kūpuna" (October 1980) for the pilot year 1980-81 reflect the kind of person that should be identified, recruited, interviewed and selected for the Hawaiian Studies Program. Selected kūpuna reflect the following characteristics:

1. is a native speaker and fluent or near-fluent in the Hawaiian Language;
2. is knowledgeable to some extent about Hawaiian culture in general and has knowledge of local history and cultural practices in particular;
3. is physically able to travel and to work on a regular basis in the classroom;
4. is able to develop rapport with classroom teachers and students;
5. is able to integrate Hawaiian language activities into the classroom program;
6. is able to relate other classroom activities into the Hawaiian language component of the program;
7. is willing and able to work collaboratively with the teacher(s) in order to plan lessons and activities which address the learner objectives of the Hawaiian Studies Program for the various strands in the particular grade level(s) involved;
8. is willing and able to share expertise in Hawaiian oriented activities within the school;
9. is willing to participate in classroom activities within the school; and,
10. is able to follow school procedures.

Identification of Kūpuna

Hawaiian elders and those of other ethnic backgrounds who are fluent native speakers of Hawaiian can be sought and identified in a number of ways. Some of these include:

- Contact the Hawaiian Civic Club, Senior Citizens group, or other such community organizations.
- Discuss the school's need with the kahu (pastor) of local Hawaiian churches.
- Ask for referrals from agencies such as Alu Like, Hawaiian Homes Department, and Queen Lili'uokalani Children's Center.
- Put an advertisement for Hawaiian speaking kūpuna in the daily newspapers and in the community newspapers.
- Ask for recommendations from the school community--PTA, custodial and cafeteria staff, teachers, booster clubs, and others.
- Broach the subject with likely looking prospects whom one sees in stores, at the beach, in the school office and elsewhere with the understanding that final selection is based on the interviewing process.

Interviewing and Selection of Kūpuna

Many, but not all, older Hawaiians in their late fifties, sixties and seventies can still speak the Hawaiian language. It should not, however, be assumed that every older Hawaiian can speak the language. Merely asking in English whether a prospective kūpuna speaks Hawaiian is not a safe way of assuring selection of high quality Hawaiian speaking kūpuna.

All candidates for the kūpuna positions should be interviewed by a board of three or four interviewers, one of whom should be an acknowledged fluent Hawaiian speaker. Assistance is readily available from the state staff if needed for this.

In the course of asking a set of prepared questions during the interview, the Hawaiian speaking interviewer should ask a question or series of questions dealing with the work of the prospective kupuna-teacher. This should be done within a conversational context and the questions should not be too technical in nature since the kupuna may lack the technical vocabulary in Hawaiian needed to discuss academic or school-related topics.

Questions could be centered around topics which the kupuna might ordinarily be expected to teach in a classroom situation--songs, cultivating kalo, fishing, picking limu, preparing food, etc. How the prospective kupuna-teacher responds must be judged by the Hawaiian speaking interviewer and that judgment should play a large part in the selection of the kupuna since one of the major criteria for selection is fluency or near-fluency as a native speaker of Hawaiian.

A test of reading or writing abilities in Hawaiian is not warranted since the kūpuna will be teaching in an aural-oral mode, however, all things being equal, kūpuna who can read and write Hawaiian should be selected over those who do not since many optional learning materials for the kūpuna relating to Hawaiian culture are available in Hawaiian language versions. The ability to read these materials from the last century and the ability to write lesson plans based on such materials will enhance the quality of the kūpuna's instruction.

Interviewees whose Hawaiian language speaking abilities are in question can be referred to state staff if desired and further interviewing in Hawaiian can take place in person or on the telephone.

Selection of kūpuna can either be made for a district pool, for specific schools or a combination of the two. Principals whose schools are involved in the program should be invited to take part in the interviews, either personally or through questions which they have submitted. The principals will presumably have referred some kūpuna for consideration based on contacts which they are able to make within their school communities.

Experience has shown that using kūpuna from the school community can have both positive and negative aspects. They will usually know and often be related to a number of children in the school. If they are natives or long-time residents of the area, they probably know stories about the area, the school and the people who have lived and worked in the area. They may be acquainted with legends, place names, important sites and other aspects of the area which would be helpful and interesting in making the Hawaiian Studies instruction more localized. Sometimes, kūpuna and/or their families have had unpleasant associations with the school or certain teachers in the past. Principals must inform themselves of such situations so that adjustments can be made in the kūpuna selection or assignment processes or in the scheduling process at the school level.

Scheduling of Kūpuna

The state standard for employment of Part-time Teachers (PTT) limits them to a maximum 17-hour week. Because the kūpuna are PTT, there is no provision for them to work overtime or to receive mileage or other benefits. In order to use the

Personal Services funds with the most cost effectiveness, it is essential that a principal schedule a kupuna into classes somewhat tightly with a minimum of lost time between classes. If teachers do not wish to release time for Hawaiian Studies instruction during the early morning hours when the children are fresh, the principal should then try to schedule the kūpuna into classes between morning recess and lunch or after lunch until the end of the school day.

The optimum contact time that leads to effective learning of Hawaiian Studies seems to be approximately an hour a week. This can be divided into three 20-minute sessions for the lowest grades or two 30-minute sessions for the middle and upper elementary grades. Teachers are encouraged to cooperate by having the students ready for the kūpuna and the kūpuna are encouraged to have a well planned lesson which can be presented with a minimum of delays and wasted time.

Like teachers who work past 3:00 p.m. or devote their weekend time to their students' extracurricular activities, kūpuna who get involved in the life of the school beyond the number of hours that they are scheduled, do so as volunteers.

HOW TO USE THIS CURRICULUM GUIDE

Each of the two units in this guide is preceded by an overview section which presents at a glance the subject areas into which the Hawaiian Studies instruction is integrated; the emphases or major lesson topics taken up within each subject area; the Hawaiian Studies Learner Objectives (from the Hawaiian Studies Program Guide) addressed in the instructional activities; and, the appendices which have been included to make teacher/student reference materials more readily available.

The same Learner Objectives may be applicable and appear in the listed objectives for several subject areas. The number of Learner Objectives listed for any particular subject area does not necessarily mean that that subject area is any more important in Hawaiian Studies instruction than another.

The body of each unit is made up of a series of columns labelled with the name of a General Education program area plus a column labelled "Games and Recreation." The subject areas involved may vary from unit to unit and from grade to grade. For example, science and mathematics are not included as major program areas integrating Hawaiian Studies in Unit I. On the other hand, science plays a major role in later grades in integrating Hawaiian Studies into the curriculum.

The Hawaiian Studies curriculum is social studies-based with the social studies activities appearing in the far left column and setting the stage for the activities which can be carried out during other instructional periods all supporting the basic theme, topic or emphasis of the unit lesson.

The whole point of the integration of Hawaiian Studies into the general education curriculum is to use Hawai'i-oriented content in instructing the program area concepts which the Department desires to be taught in the various grade levels. When teachers address the Learner Objectives for Hawaiian Studies, they are generally attending to the Performance Expectations for the various subject areas upon which the Learner Objectives were based.

CULTURE STUDY THROUGH DRAMATIC INQUIRY

What is the best way to study another culture? Anthropologists say that one must take oneself out of one's culture and into another culture in order to get an inside view. One way of experiencing another culture is through the process of dramatic inquiry. This is a systematic approach to learning about another culture through dramatization. In this process, the students are encouraged to dramatize possible uses of cultural artifacts within an arranged environment and to explore ideas and inquire about the life processes of a culture.

The following outline suggests the possible sequence of activities:

1. An Arranged Environment - An array of familiar as well as unfamiliar Hawaiian artifacts and equipment is displayed. Examples:

   'umeke (bowls), ko'i (adzes), 'upena (nets), lūhe'e (octopus lure), 'ō'ō (digging stick), mea kaua (weapons) and mea hana (tools).

   The children are invited to explore and handle the objects, to discuss and to hypothesize how the articles were used.

2. Dramatization -

   A. The children select one object each and think about how that object might have been used in ancient Hawai'i.

   B. The classroom is divided into 3 areas:

      1) Uka - the mountains/uplands
      2) Kula - the midlands
      3) Kai - the sea

   C. The children decide in which area they would have used their object if they were living in ancient Hawai'i.

   D. They dramatize how the objects were used in their areas. A recording of a chant may be played to create an atmosphere that suggests ancient Hawaiian living.

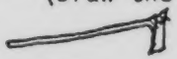
   E. The groups share their dramatizations with the entire class.

3. Expression of Needs -

   A. The students discuss their experiences and questions are raised and recorded on charts. Record all of their questions without giving away the names of the objects.

      Example:

      What is ? (Draw the object the child refers to; avoid giving the name of the object.)

      What was  used for?

   B. The questions then become the basis for the year's program.

   C. The questions can be grouped into workable research groups by the children. Example: Which questions seem to go together?

4. Series of Learning Activities - The teacher and students plan activities for gathering information. They also plan which area of Hawaiian culture to study first based on the students' interests and the dramatization. The activities may include:

   resource speakers
   research - individual and group
   field trips
   audio visual research
   experimentation

5. Further Inquiry - The children share the information learned through participation in learning activities. This leads to further dramatizations on a higher level of thinking and the entire process repeats itself.

Once the sequence of activities has been completed, it leads back to the original situation where an arranged environment should be established and the cycle begun all over again dealing with new questions which the students needed to discuss, dramatize and research. These cycles continue on more complex and accurate levels which refine the students' knowledge and skills.

It is important to note that this inquiry technique can be used in many ways. In the place of actual realia or artifacts, teachers may choose to use photos, drawings, plants, foods, recorded sounds, sheet music, dance instruments or any number of other kinds of audio-visual instructional aids. The children do not always have to dramatize the use of something, although the silent dramatizations do provide opportunities for the other children to ask questions.

The teacher or kupuna should be careful to encourage questions after a dramatization or any other kind of performance or presentation. If the children provide answers rather than ask questions, the follow-up research activities cannot really get started. Through the use of the inquiry technique, teachers can find out what is really important to the children and build lessons based on that interest. Supplementation can be made later of facts, skills and concepts which the teacher believes to be important once the children have been "hooked" into a lesson fashioned from their own expressions of interest and inquiry.

CULTURE STUDY THROUGH DRAMATIC INQUIRY

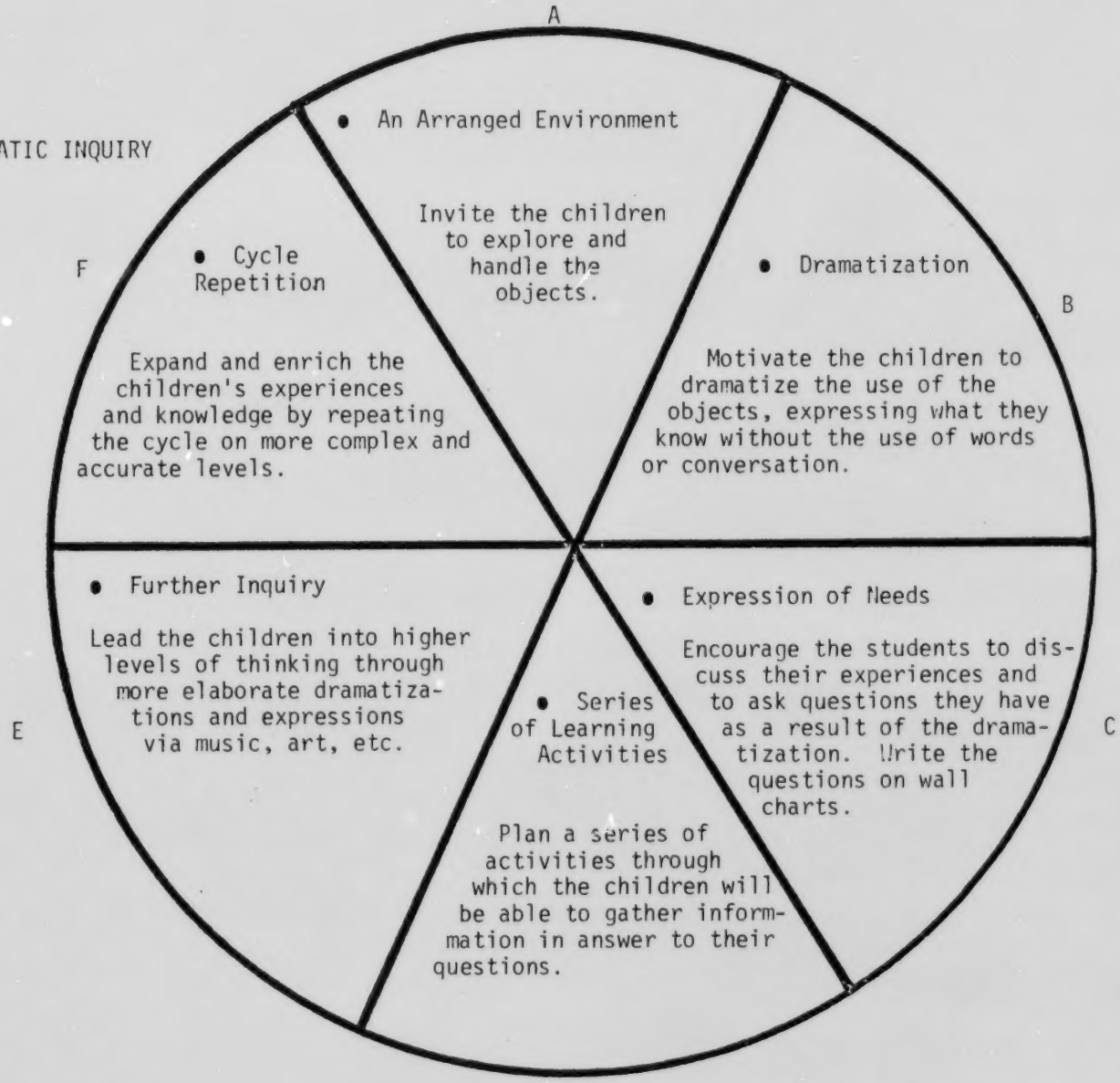

A
• An Arranged Environment
Invite the children to explore and handle the objects.
B
• Dramatization
Motivate the children to dramatize the use of the objects, expressing what they know without the use of words or conversation.
C
• Expression of Needs
Encourage the students to discuss their experiences and to ask questions they have as a result of the dramatization. Write the questions on wall charts.
D
• Series of Learning Activities
Plan a series of activities through which the children will be able to gather information in answer to their questions.
E
• Further Inquiry
Lead the children into higher levels of thinking through more elaborate dramatizations and expressions via music, art, etc.
F
• Cycle Repetition
Expand and enrich the children's experiences and knowledge by repeating the cycle on more complex and accurate levels.

TABLE OF CONTENTS

Foreword		i
Introduction		iii
	The Role of the Teacher in the Hawaiian Studies Program	v
	The Role of the Kupuna in the Hawaiian Studies Program	vi
	Collaboration between Teacher and Kupuna	vi
	Hawaiian Studies Program Administrative Information	
	a. Criteria for Selection of Kupuna	vii
	b. Identification of Kūpuna	vii
	c. Interviewing and Selecting Kūpuna	viii
	d. Scheduling of Kūpuna	viii
	How to Use This Curriculum Guide	ix
Culture Study Through Dramatic Inquiry		x
UNIT I	The 'Ohana in the Community	2 - 67

This unit focuses on the family in the community and the interdependence within the community. The children investigage and familiarize themselves with community helpers; goods and services they provide to meet the needs and wants of community members; and, how life in the community today is similar to or different from that of an earlier Hawai'i.

	Overview	2
	Lesson Activities	8
	Appendix A. Nā 'Oihana Like 'Ole	30
	B. Go, Glow, Grow Food Chart	31
	C. Maika'i, Mahi'ai	32
	D. Kauhale	40
	E. Energy in Our Lives	41
	F. Nutrition Fact Sheet	44

UNIT I (Cont.)

Appendix G. Checklist: Goods and Services 45
H. Chant: "Eia Mākou Nā Mahi'ai" 46
I. Song: "He Kino Maika'i Nō" 47
J. Chant: "Body Parts Chant" 48
K. Song: "Nā 'Oihana Like 'Ole 49
L. Song: "'Ā, Aloha Mai" 51
M. 'Ohana 52
N. Concepts of Self and 'Ohana 54
O. My Daily Breakfast Foods 67

UNIT II Community Environment and Lifestyle 68 - 180

The various factors involved in community living are studied in this unit. The children study natural resources, their availability and importance in the life of a community and people's influence on the use and management of natural resources in the community.

Overview 68
Lesson Activities 78
Appendix A. Maps of the Islands 129
B. Worksheet: Original Source 137
C. News Articles: Water Problems 138
D. Food Chain 148
E. Pictures of King Kamehameha and Prince Kūhiō 149
E[1] Important Cultural and Historical Contributors to Our Island Communities (Sample) 151
F. Water Cycle 153
G. Hula Instruments 154
H. Song: "Huki I Ke Kalo" 155
I. Parts of the Kalo Plant 156
J. Some Natural Resources of O'ahu 157

Unit II (Cont.)

Appendix K. Summary of the legend, "The Empty Sea" 158
L. Game: "Let's Go Swimming" (gameboard) 159
L1. Game: "Let's Go Swimming" (word cards) 160
L2. Game: "Concentration" (word cards) 162
M. Song: "Ka'uiki" 165
N. Worksheet: "We Predict" 166
O. Ahupua'a 167
P. Uses of the Breadfruit 171
Q. Picture of a Pā'ū 172
R. Mo'okū'auhau o Kalākaua 174
S. Genealogy Chart 175
T. Chant: "Nā Kumu Ola O Hawai'i" 176
U. Game: "Know the Alaka'i" 177
V. Summary of the legend, "The Flying War Club" 178
W. Language Patterns 179

Basic Hawaiian Vocabulary Lists, Grades K-2 181
Bibliography 188
Songs and Chants 191

CONTENT AREAS	EMPHASES
SOCIAL STUDIES	Members of 'ohana (families) experience many changes. 'Ohana within a community must have the help of other 'ohana and friends in the community in meeting their needs. People depend on other people for goods and services. Laulima (interdependence) A community has people who kōkua each other. Kōkua (help) People in a community alu like to provide goods and services. Alu like (work together) People in a community have kuleana to perform. Kuleana (roles and responsibilities) Everyone in the community needs aloha and 'ike (recognition). Aloha (love, caring)
LANGUAGE ARTS	People experience changes in family roles as growth takes place. Listening to a Hawaiian story. Identifying kuleana changes of 'ohana members. Identifying 'ohana concepts in the story. Identifying needs of an 'ohana. There are many community helpers who perform different roles. Learning Hawaiian vocabulary for the various professions. Reading about various professions and writing a summary about a possible future career choice. A community has many places of interest. Learning street names in the neighborhood. Writing diaries about activities in the neighborhood and the community. Giving speeches about future career choices.

LEARNER OBJECTIVES	APPENDICES
• Describes the role of the family in society and explains its relationship to the larger community. • Describes how community members are dependent upon one another in our society. • Describes the importance of work (hana) within the economic system of the community. • Identifies and describes the major roles and functions of different members of the community in Hawai'i.	Unit I - N Concepts of Self and 'Ohana, pp. 54-66
• Recognizes ways that children in former Hawaiian times may have been alike and different from the student today. • Identifies objects or people in pictures with simple Hawaiian phrases or single word responses. • Responds in Hawaiian to simple oral instructions and requests given in Hawaiian. • Listens to and answers questions orally about a legend or story about Hawai'i told in English but containing Hawaiian content words appropriate to the child's level of language development in Hawaiian. • Imitates with correct pronunciation the Hawaiian words, expressions and phrases modeled by the teacher or kupuna. • Identifies and describes the major roles and functions of different members of the community of Hawai'i. • Works with partners or groups on Hawaiian language oriented activities.	Unit I - A Nā 'Oihana Like 'Ole, p. 30 - C Maika'i, Mahi'ai', pp. 32-33 - D Kauhale, p. 40 - G Checklist, p. 45

CONTENT AREAS	EMPHASES
HEALTH	Healthful living in the neighborhood today depends on many factors. Studying individual changes in the self and in others. Identifying community helpers who work to keep us healthy. Categorizing foods into three basic groups (Go, Grow and Glow) for wise food choices. Using the senses to identify healthful foods. Identify feelings associated with food choices.
MUSIC	Creating songs and chants in an effective way for children to learn concepts of living. Children participate in creating lyrics and music for their experiences in life. Nā mahi'ai "Eia Mākou Nā Mahi'ai" "Kanaka Mahi'ai" "Ku'u Po'o" Body parts "Body Parts Chant" Neighborhood "Who are the People in Your Neighborhood?" Aloha "'Ā, Aloha Mai" Greetings "Hawai'i's Greetings" Original compositions by students

LEARNER OBJECTIVES

- Cites reasons for food choices for self and others.
- Identifies changes one goes through physically that affect other kinds of changes in food choices, physical activities and in other areas of growth.
- Discusses how food choices of the Hawaiians were limited by what was grown or caught by them.
- Recognizes that within any ethnic or racial group, an individual is unique, similar to but different in some way from all other fellow members of the group and from all other people.
- Listens to and accepts opinions of others in discussions.

APPENDICES

Unit I - B Go, Glow, Grow Food Chart. p. 31

- E Energy in Our Lives, p. 41
- F Nutrition Fact Sheet, p. 44
- O My Daily Breakfast Foods, p. 67

- Imitates phrases in a Hawaiian chant.
- Sings selected Hawaiian songs introduced by the teacher while playing rhythm instruments in time with the beat.
- Accompanies a Hawaiian chant correctly using an instrument such as an ipu, kāla'au, kā'eke'eke, or pū'ili.
- Performs a rhythmic dance, pa'i umauma (simple chest-slapping hula) or other hula noho (seated hula).
- Maps melodic/rhythmic patterns of a Hawaiian chant with hands, simple dance patterns, or body movements.
- Composes and performs simple rhythmic patterns using Hawaiian instruments.

Unit I - H Eia Mākou Nā Mahi'ai, p. 46

- I "He Kino Maika'i Nō", p. 47
- J "Body Parts Chant", p. 48
- K "Nā 'Oihana Like 'Ole", p. 49
- L "'Ā, Aloha Mai", p. 51

CONTENT AREAS	EMPHASES
ART	Creative experiences help develop an appreciation for and an awareness of the elements of a community. Timeline compositions Theme: "Changes We Go Through" Mobiles Theme: "Needs and Wants" Puppets (paper bag) Theme: "Community Helpers" Creating logos Theme: "Community Profile" Mural Theme: "'Ohana Concepts Practiced in the Community" Poster making Theme: "Campaign for Good Health"
GAMES AND RECREATION	Children can have fun learning about and improving the coordination of their bodies through the participation in simple games and sports and dances of Hawai'i.

LEARNER OBJECTIVES	APPENDICES
• Volunteers to lead or to help in individual or group projects in the family or in the school. • Practices behavior that illustrates respect for self, fellow schoolmates, teachers and community resource people. • Recognizes that within any ethnic or racial group, an individual is unique, similar to but different in some way from all other fellow members of the group and from all other people. • Listens to and accepts opinions of others in group discussions. • Detects factors in the local environment of the home, school or community which affect health and safety.	
• Follows rules in simple Hawaiian games and activities. • Performs basic body movement patterns in games and dances. • Participates competitively in simple Hawaiian games and sports. • Relates the use of Hawaiian games, sports, and quieter pastimes in former times to improving coordination and agility.	Unit I - M 'Ohana, pp. 52-53

SOCIAL STUDIES	LANGUAGE ARTS	HEALTH

- The activities in this unit focus on an in-depth study of the characteristics of the community and the interdependence within the and how life in the community today is similar to or different from that of an earlier Hawai'i.

A. Theme: Members of families experience many kinds of changes.

Bulletin board display.
Cut out pictures showing a family with a baby and then an 'ohana with a grown-up child. Label the pictures "Before" and "Now."

1. Encourage the children to study the bulletin board and notice the changes they see.

2. Have them share some of the changes they have gone through since kindergarten.

3. Talk about changes in their

   - height and weight
   - activities
   - friends

4. Ask the children to talk to their parents and to look at pictures in their 'ohana albums to discover changes. Have them share these photographs if they so desire.

A. Theme: Roles in the 'ohana change as growth takes place.

Preparation:

1. Make copies of the pictures in Appendix Unit I-C, pp. 34-39. Color the pictures to make them more interesting for the children to look at. Glue the pictures on a backing for easier handling.

2. Write the names of the members of the 'ohana on flashcards (see p. 33).

Procedure:

1. Say

   U - i! Hele mai (come). Noho i lalo (sit down)! Ho'olohe (listen)! I would like to share a special story with you about a young boy in early Hawai'i who learned the meaning of "change" and of "growing up." His name was Mahi'ai. Ho'olohe as I read the story. See if you can find out how he felt after his first experience in growing up.

2. Read the story using good voice changes for character parts.

A. Theme: Changes in the physical body are due to growth.

Preparation:

Get pictures of children engaged in different kinds of physical activity. Mount them on the bulletin board.

Procedure:

1. Have the children observe the pictures and then share what they see.

2. Ask:

   a. What kinds of things can you do today as a second grader that you couldn't do when you were a kindergartener?

   b. What changes has your body gone through so that you are able to do more things today?

   c. What do we need to do in order to keep our bodies healthy and strong?

   (Responses: exercise, sleep, eat good food, etc.). Write these on the board.

MUSIC	ART	GAMES AND RECREATION

community. The children are asked to investigate and familiarize themselves with community helpers, the goods and services they provide.

Song

A. Theme: Body parts

Title: "He Kino Maika'i Nō" (A Good Body)

Source: See Appendix Unit I-I, p. 47.

Procedure: The children have already learned some body parts in earlier grades. Use the chart, "Ke Kino o ke Kanaka," from Nā Ki'i Ho'ona'auao (set of posters for the Hawaiian Studies Program) to identify those body parts children already know. As new body parts are introduced, another verse can be composed for the song. For more body parts, see Appendix Unit I-J, p. 48.

Chant

B. Theme: Body parts

Title: "Body Parts Chant" (Nā Māhele O Ke Kino)

I. Timeline Compositions

A. Theme: Changes I have gone through.

Materials: Large white drawing or timeline butcher paper; crayons

B. Procedure:

1. Having written the three changes they have gone through, the children will now illustrate them on white paper.

2. Have the children draw three pictures. These drawings may or may not reflect changes in other members of their 'ohana.

3. Encourage the children to draw large characters and to utilize their space well. Also, encourage them to fill up the empty spaces so that their drawings will look complete.

4. Have them arrange their drawings in the proper sequence.

5. Encourage them to label each drawing with the approximate date of the event illustrated in the drawing.

A. Theme: 'Ohana fun

1. Review the members of the 'ohana. See Appendix Unit I-M, p. 52. Share concepts of family living in early Hawai'i with the children. Review the names of family members with the children.

2. Have the children say the Hawaiian name of each family member.

3. Play the game 'Ohana scramble.

   a. Students sit in a large circle.

   b. Each student is assigned a Hawaiian role name from an 'ohana (makua kāne, makuahine, mo'opuna, kupuna) alternately.

   c. One student is left without an assigned role and stands in the middle.

   d. The teacher or student caller calls out a Hawaiian role name.

   e. All students with the assigned role must exchange places.

SOCIAL STUDIES

5. Have the children share changes they have observed in other members of their 'ohana. Ask them:

   a. How do you feel about these changes?

   b. Are all changes good?

   c. What kinds of changes can make us feel sad, angry, or happy?

6. Motivate the children to think about three changes they have gone through since kindergarten and write them on a 3" X 5" card for the bulletin board.

B. Theme: Nā 'ohana (families) must have the help of other people in filling their needs and wants.

Bulletin board display.
Have two charts labeled "Needs" and "Wants"

1. Ask the children:

   a. When you got up this morning, what were some of your needs? List them.

   b. How does your family help meet these needs?

LANGUAGE ARTS

3. Discussion:

   a. How old do you think Mahi'ai is in this story?

   b. Why was he so excited?

   c. What was he going to do today that was different from what he had been doing?

   d. What does this change in kuleana (role) tell you about Mahi'ai?

   e. How did this change affect Mahi'ai by the afternoon?

   f. When we go through changes in our bodies, do they cause changes in our activities?

   g. What other changes were mentioned in the story? (change in eating place, after-dinner responsibilities)

   h. How many of you have new jobs in your homes now that you're older?

   i. How do these new kuleana make you feel?

4. Review the Hawaiian term for each family member by using the pictures of Appendix C and the vocabulary list on p. 33.

HEALTH

3. Talk about the differences in individuals and how they all need different amounts of food, exercise, sleep, etc.

4. Have them draw "Before and After" pictures of themselves showing one activity they enjoyed as a kindergarten student and what they enjoy doing today.

5. Food choices:

   Ask:

   a. What kinds of food did you enjoy when you were younger?

   b. Do people all over the world eat the same kind of food as we do?

   c. What determines the kind of food people eat? (environment, availability, cost, etc.)

   d. Which foods are especially important in helping you grow? (proteins) Name some of these protein-rich foods.

6. Have available the health cards of the children. Write their height and weight of their kindergarten year on a chart. Have them discuss and comment on how they feel about themselves today as compared to two years ago.

MUSIC

Purpose: To teach the children new body parts. This is a fun way to teach simple counting and body parts.

Source: See Appendix Unit I-J, p. 48. As each body part is learned, add it to the yellow wall chart "Ke Kino o ke Kanaka."

Chant

C. Theme: Nā mahi'ai (the farmers)

Title: "Eia Mākou Nā Mahi'ai"

Source: Kamehameha Schools. Explorations: Ho'omāka'ikai, 1976-1981. Flora and Fauna Section. See also Appendix Unit I-H, p. 46.

Preparation: Write the words on a chart with the translation. Set up tape recorders.

Procedure:

1. Talk about the story they hear in language arts and discuss the work of a farmer today compared to a farmer in early Hawai'i.

ART

6. Have them share their timelines with the class. Display the completed timelines around the classroom.

7. Discuss with the children what they think would be a good title for the display.

8. Evaluate the activity by talking about how they feel; also whether the information on the timeline was useful, accurate, and reflected changes students have gone through.

II. Mobiles

A. Theme: Needs and wants

B. Materials needed: Crayons, paint, construction paper, scraps of paper, fabric, beans, seeds, etc., dowels of various sizes.

Plan with the children the appropriate size for the projects so that the dimensions of each article is within a certain limitation and conducive to a hanging mobile.

C. Procedure:

1. Having discussed wants and needs in social studies, have the children choose one want and one need.

2. Plan a 3-D model of each item chosen.

GAMES AND RECREATION

f. The student without an assigned role tries to find a spot left open by another student and sits in it, leaving someone else without a space.

g. Change assigned roles after a while and start playing again.

h. Remind the children to be aware of 'ohana concepts as they scramble for a space.

(Variation: Caller shouts "'Ohana" and everyone must seek new seat.)

B. Theme: Nā mahi'ai

1. Having learned the chant "Eia Mākou Nā Mahi'ai," the children should be motivated to create hula motions to accompany the chant. See Appendix Unit I-H p. 46 for the words.

2. Encourage the children to use the total body in producing hula motions.

C. Theme: Developing better skills using the body

1. Show the children some pictures of Hawaiian children playing Hawaiian games. See Mitchell, Donald, Hawaiian Games for Today, pp. 28-39.

SOCIAL STUDIES

c. What are some of your wants?

d. How do members in your family satisfy your wants?

2. Give each child two sheets of paper and have all of the children label one sheet "Needs" and the other, "Wants." Have them list their own needs and wants in one corner of each sheet. Have them select one want and one need to illustrate. Use watercolors. When the pictures are done, have the children share their pictures with the class.

3. Select a committee of children to arrange these pictures on the bulletin board.

4. Evaluate the activities:

   Ask:

   a. Do all people have similar needs?

   b. Do all people have the same wants? Why?

   c. What does this tell us about people?

LANGUAGE ARTS

5. Have the children identify the 'ohana concepts they see illustrated in the pictures.

B. Theme: All 'ohana experience certain universal needs which they seek to satisfy.

1. Identify the needs that are being satisfied in the story. (Need for food, need for sleep, need to feel important, need to feel wanted, etc.).

2. Ask:

   a. What did Mahi'ai want but resisted because of his new kuleana (responsibility)?

   b. How important was the work they were doing to the other 'ohana in the kauhale?

   c. Are we just like Mahi'ai sometimes?

Culmination:

See Appendix Unit I-D p. 40. Have the children study the picture and share the needs that are being met and roles being played by whom.

HEALTH

a. Take them to the health room and have their heights and weights taken. Enter these new figures on the class chart. Discuss the changes.

b. Ask:

   1) Why do some of us grow faster than others?

   2) Is it only because of the food we eat?

   3) What other factors are responsible for some of us growing bigger, stronger, or taller than others?

   4) What do all people need in order to grow up healthy and strong like Mahi'ai, the boy in our story in language arts? List the needs on a chart. Relate this lesson to the social studies lesson, Theme B. on pp. 10 to 26.

Evaluation:

Invite a resource person in the community to talk to the children about how children grow. This person may be a parent who is a doctor or a public health nurse or a registered nurse.

Music

2. Show them a picture of an 'ō'ō (digging stick) as was used for digging in early Hawai'i or bring in an actual 'ō'ō, if one is available. Check with the District Resource Teacher. Discuss the differences in tools used and energy expended.

3. Say the Hawaiian words for them, one line at a time. (A kupuna would be a key person for this lesson.) Encourage the children to now feel the spirit of the chant.

4. Have the children identify words they have learned or heard before and underline them.

5. Chants are done in a minor third so encourage the children to compose their own chant tones to accompany the words on the chart. They may work in groups or alone.

6. Have tape recorders ready around the room for them to record their chants. Allow them ample time to practice.

7. If the children are not sure of themselves, have them listen to a few chants. Ask your school kupuna for help or play samples from the following records:

61

Art

3. Steps

   a. Draw the outline of the object on colored construction paper.

   b. Put a second sheet of paper under the first and cut around the outline. This will produce two identical shapes.

   c. Decorate the two shapes.

   d. Staple the two shapes along the edges leaving an opening.

   e. Stuff crumpled pieces of newspaper inside the shape and staple the open edge together.

   f. Attach a string to the object.

   g. When all of the objects are done, compose a mobile or several mobiles to hang from the ceiling.

   h. Encourage the children to compose a simple two-three sentence thought about "wants" and "needs."

   i. When the projects are done, talk about balance as it applies to constructing a mobile. Encourage the children to suggest methods of achieving balance, e.g., length of string, distance from center, etc.

Games and Recreation

2. Explain that the Hawaiians used to roll a stone on the ground to go through two pegs. Ask them to predict why they did this. (To develop eye-hand coordination.)

3. Prepare them for the development of better accuracy. Set up two pegs and allow them to roll a rubber ball across the ground through the two pegs to a partner on the other side.

4. Take turns.

5. Then have them toss an underhand throw to each other to catch. They should be able to catch each other's throws.

6. As they get better, encourage them to move further apart from each other.

7. Many other kinds of body awareness activities are available for the teacher in OIS/DOE Leaps and Bounds, a guide for ETV Movement Education Series, available to all public school teachers. See your librarian.

D. Theme: Nā Māhele o Ke Kino (Body parts)

Game: "He aha kēia?" What is this?

1. Students sit in a large circle.

62

SOCIAL STUDIES

5. Looking at the list of needs and wants on the bulletin board, have the children now focus on job titles of people whose work helps fill the needs and wants of families.

   a. Have the children quickly share the names of these community helpers. List them on a chart.

   b. Play the song, "Who are the people in your neighborhood?" from the Original Sesame Street, L.P. Encourage the children to listen very carefully for the people named in the Sesame Street neighborhood.

   c. Have the children name the people who were named on the record. Have them add other job titles they can think of and add those to the list.

   d. Have the children look at the list and categorize the workers listed into:

      1) People who provide goods.

      2) People who provide services.

LANGUAGE ARTS

C. Theme: Nā 'Oihana Like 'Ole (The Various Professions)

Procedure:

As the study of "Community Helpers" goes on in social studies, the children can be involved in learning the names of these people in Hawaiian. If a kupuna is available, she/he may be the person to present this lesson.

1. Have available a collection of pictures of community helpers. At each session, hand out a few pictures to the students. Have them stand and tell what they know about the particular helper.

2. Place the picture of the community helper on the bulletin board and introduce the Hawaiian name for the worker by writing it on a flash card and placing it below the picture of the community helper. See Appendix Unit I-A, p. 30 for the Hawaiian equivalent.

3. Encourage the children to select one community helper job which they might like to do when they become adults.

   a. Have them go to the library to borrow a book or books about their favorite occupation.

HEALTH

B. Theme: Community helpers who keep us healthy

Materials: Pictures of these helpers.

Procedure:

1. Ask:

   a. Who helps to keep us healthy in school? in the community? (Write their responses on the chalkboard.)

   b. What do these people do to keep us healthy?

      E.g., doctor
      nurse
      health aide
      dentist
      orthodontist

   c. Who helps you with your health in school? (health aide, cafeteria manager)

   d. What does a cafeteria manager do to keep us healthy? Write their responses on a chart.

Job Title	What We Think	What We Found
cafeteria manager		

MUSIC

Mele Inoa, LP Poki Records, by Ka'upena Wong

Hi'ipoi I ka 'Āina Aloha, LP Hula Records, by Edith Kanaka'ole

8. Children are better able to chant when they are exposed to records and tapes and live chanting. Encourage them to listen to these chants by setting up a listening corner.

9. Have the children share their original chant for "Eia Mākou Nā Mahi'ai."

Song

D. Theme: Ka mahi'ai (The farmer)

Title: "Kanaka Mahi'ai"

Tune: "The Farmer in the Dell"

Words: "Kanaka mahi'ai, kanaka mahi'ai
Aloha kāua
Kanaka mahi'ai"

This song can be sung in a two-part round.

ART

D. Evaluation:

1. Look at the variety of wants and needs expressed by everybody.

2. Talk about differences and similarities in people.

3. Ask:

a. Will our wants and needs change as we grow and mature?

b. Imagine yourself living in Hawai'i many years ago. Would your wants and needs be the same? Why or why not?

III. Paper bag puppets

A. Theme: Community helpers

Materials: Lunch size paper bags, paint, crayons, yarn, construction paper, fabric scraps and other craft materials, glue, scissors.

B. Procedure:

1. Have the children think about what the community helpers look like. Have them choose one helper and make a puppet representing the person.

2. Encourage the children to use a variety of materials to make their puppets interesting.

GAMES AND RECREATION

2. Teacher asks a student on his/her right, "He aha kēia?" (pointing to a body part)

3. If the student knows the Hawaiian word for the body parts, he/she responds, "He maka" (an eye).

4. If the student does not know the answer, he/she turns to the next person on the right and asks "He aha kēia?" The question is asked until someone is able to provide the correct response.

5. The person who makes a correct response asks the new question.

Variation for above game.

1. Teacher asks, "Is this your po'o?" (pointing to a part of the body)

2. Student must respond, "'Ae, it is my po'o," or "'A'ole it is not my po'o, it is my maka."

3. After giving a correct response, the student may ask the question.

Game: "Simon Says"--Hawaiian Style

1. Teacher needs to be the leader until children become familiar with the Hawaiian terms for parts of the body. "Simon says, 'Touch your wāwae.'"

SOCIAL STUDIES

e. Clarify the terms "goods" and "services" by giving examples, e.g., "Doctors provide services," "Bakers provide goods."

f. Ask the children:

1) Where can we go to see these people at work? (shopping centers, city offices, farm areas, etc.)

2) Where do you think these people live in relation to their job sites? Do they have to travel far distances to work?

3) Where do your parents work? What kinds of jobs do your parents perform? (Place a check next to any job title represented by the parents of children in the class.

4) What do we call a place where families live together and work together and play together? (neighborhood, community, housing project, condominium or townhouse complex, family compound, etc.)

LANGUAGE ARTS

b. Have them share their books with the class, even if it is only pictures.

c. Encourage them to take the books home and read about the community helper job they've chosen.

d. Have them write a paragraph of information about their favorite community helper's job and place these on the bulletin board. From this activity, they can plan for their activity in art . . .making paper bag puppets. See art lesson, p. 15 Activity #III.

D. Theme: Knowing the street names in the neighborhood is very important for many reasons.

(This activity goes along with the social studies activities dealing with community walks. See activity 7 on p. 18.)

Preparation:

Ask the children to identify the streets on which they live. If they are not sure, have them find out when they go home. Have them write the name of the street on a piece of paper to assure the correct spelling.

HEALTH

2. Arrange to have the cafeteria manager of your school talk to the children about his/her job as it relates to the health of the children. Perhaps a walk through the cafeteria kitchen would be beneficial for the children to see the preservation and storage of food, the cleanliness of the preparation area and the precautions taken to prevent food contamination.

3. Evaluate by filling in the third column of the chart.

4. Project a transparency of Appendix Unit I-B, p. 31 on the overhead projector. Discuss the contents of this transparency.

Ask: What does this transparency tell us about the food we eat? Explain the chart completely to the children. Stress the importance of the foods in all three groups.

5. Using the same transparency, compose a large wall chart. Draw a circle with three equal parts. Do not draw any of the foods on the chart. Just show the following outline.

MUSIC

Composing

E. Theme: Community helpers

Procedure:

1. As the children learn about the community helpers, they can compose short verses to sing about each worker.

2. Using the tune "The Farmer in the Dell," compose new verses by using the Hawaiian equivalent for each community helper. See Appendix Unit I-A, p. 30 for the list of job titles. See also Appendix Unit I-K, p. 49 for more suggested verses.

3. Encourage the children to write some verses of their own before presenting Appendix Unit I-K.

4. Other compositions can be written to the tune of familiar nursery tunes., e.g., to the tune of "Old MacDonald Had a Farm," a ditty about a dentist could be composed by a group of children. See Appendix Unit I-K, p. 49.

F. Song

Theme: People in the neighborhood

Title: "Who are the People in Your Neighborhood"

ART

3. Have them work in groups and encourage them to alu like (work together), kōkua (help one another) and laulima (cooperate).

4. When the puppets are done, encourage the children to manipulate their puppets for each other.

C. Evaluate the activity

IV. Creating symbols or logos

A. Theme: Community profile

B. Materials: scissors, magazines, crayons, paste, paint, drawing paper, construction paper.

C. Procedure:

1. Ask: What is our community like? Do we have places to shop? play? work? If we were newcomers to the community, how would we know where to go?

2. Have the children think about symbols or logos they have seen that have helped them find a particular place, like a cross to symbolize a place of worship.

3. Show them some logos that are readily found in your community like the red and white bucket of Kentucky Fried Chicken.

GAMES AND RECREATION

2. If children point to the wrong part, they must sit out the next command. They may rejoin the game as soon as someone else makes an error.

3. As in "Simon Says," commands should be given occasionally without the clue words, "Simon Says," in order to build up attentiveness and listening skills.

Dance

Song--"Mele Pā'ani E"

Source: Māhoe, E Hīmeni Hawai'i Kākou, 1973 (Available in most school libraries, pp. 90-91. Cassette tapes accompany the book.)

Preparation: Write the words on a wall chart.

Procedure:

1. Have the students listen to the tape to capture the rhythm and meaning of the story/song.

2. Have the students create movements to depict the essence of the story/song.

Social Studies

5) Have the children bring pictures to school that show the above locations. Have them analyze the pictures for similarities and differences.

6) Decide with the children which word best describes the area in which they live.

7) Plan walks with the class. Using the school as a reference point, walk two to three blocks in each direction.

   a) Have the children look for community services and production.

   b) Have them also observe business establishments, neighborhood layout and important landmarks.

8) Place a large sheet of butcher paper on the bulletin board with the main street drawn. Plan with the children the symbols they want to use to represent the businesses, landmarks, houses,

71

Language Arts

Procedure:

1. Have the children share their street names.

2. Write these in the first column on a chart.

3. Say the names as you write them and have the children repeat them.

4. In the second column write the meaning of the street name if it is a Hawaiian name. If a kupuna is available, she/he might know or be able to find a legend that relates to the street name, e.g., Kawaiaha'o. See Pūku'i, Mary, Place Names of Hawai'i for further reference to street names.

5. Add these street names to the neighborhood map with the help of the children.

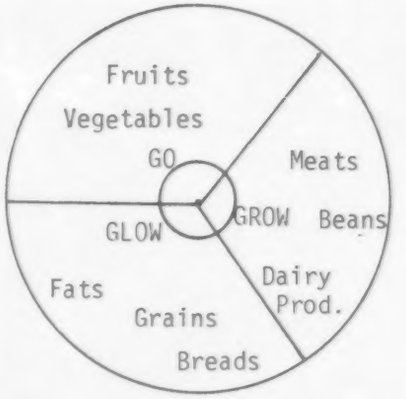
6. Call on individual children to go to the map and show the rest of the children the route they use to get to their homes. Encourage them to pronounce the names of the streets they have to walk on to get to their homes.

Culmination:

Hand each of the children a smaller version of the neighborhood map with only the street names. Have them

Health

a. Have the children share what they ate for breakfast. Write these foods on the blackboard. Write the three categories of food on the chart.



72

MUSIC

Source: Original Sesame Street, L.P. Sesame Street Records

Procedure:

1. The children should be familiar with the song, having heard it in social studies.

2. Ask: Who are the community workers not mentioned in the song? Have them think about those workers we have in Hawai'i that may not be found in other places. List these on a chart.

3. Sing the song with the record. When the children are familiar with the tune, motivate them to compose a verse for a community helper in our Hawaiian community, e.g., lei seller--

   Oh, the lei sellers are found
   With flowers all around.
   They're people that you'd meet
   If you need someone to greet.
   They're people in my neighborhood.

   fisher
   lau hala weaver
   kapa maker
   quilt maker
   tour bus driver
   Polynesian dancer

ART

4. Give the children a chance to be creative. Have them plan a new community of their own. Have them create logos for their community that reflect places to eat, places to play and places to have fun. If they can think of more, encourage them to do so. Divide them into 'ohana. Have them alu like (work together) to create a community they would like to be a part of. This "ideal community" can be an ongoing project to which they can add new things as the study continues.

5. The communities may be created in cardboard boxes. Dioramas may be a better means of expressing their creations.

6. Encourage the children to be creative and to include as many community goods and services as possible, e.g., police, fire station, city hall (satellite), gas station, plumbing store, etc.

7. To add people, have the children think about the kinds of people who live in their neighborhood and draw them or take snapshots of them. Mount these on the bulletin board above the diorama.

GAMES AND RECREATION

3. Interpret the song using foot movements. Ask your kupuna, Hawaiian Studies or Music Resource Teacher to teach them the simple kāholo step (vamp) for the last line of each verse.

4. The children will pick up the melody as you continue to play the tape. This is a fun dance so encourage the children to have fun with it.

E. Theme: Neighborhood living

Game: Getting to know your community

After the children have discussed goods and services and have made a list, set up a simulated community in the classroom with places that provide goods and/or services.

1. Divide the class into two teams.

2. Each team member has to walk to the right place when the caller calls out the need.

   E.g., Caller: I need a gallon of milk.

   Player: Walks to the "supermarket."

SOCIAL STUDIES

hospitals, farms, etc. that are in their community. The symbols can be made in art class. Have the children create the map.

9) Upon the completion of the map, present the following hypothetical situations:

a) If this store went out of business, how would the families in the community buy what they needed?

b) If there were no fire station, what could be the result?

c) If a construction company were authorized to build new homes on the playground next to the school, how would that affect you?

d) If many of the 'ohana in the community decided to move out of the community, what might happen? How would it affect the businesses and services?

LANGUAGE ARTS

draw in the route to their homes from school. Then have them share how they would tell a policeman the directions to their home without using a map.

Writing diaries

Theme: Interdependence

Procedure:

1. Have the children keep a log of their activities in the community. Have them begin writing a daily journal of all their activities for a month or longer.

2. Encourage them to write down every activity they participate in and every service they receive. If they go to the service station before school and mail a letter on the way, log the activities down. Encourage them to keep accurate records so by the end of the month, they can readily see how dependent they are on other people.

3. Have them also write the number of times someone depended on them to do a service or provide goods.

   E.g., Mom asked me to help her wash the car.

   My brother needed the shoes I had outgrown.

HEALTH

b. Discuss the three categories and have the children name foods for each category.

c. Have available magazine pictures of food. Divide the class into three 'ohana and have them cut out pictures to place on the chart.

d. Run off copies of the above Basic Three foods chart. See Appendix Unit I-O, p. 67.

Have the children write the foods they eat for breakfast for one week.

Ask:

1) Are you eating foods from all three groups?

2) Why is it important to eat a balanced meal?

3) What do we need in order to do activities during the day? (Energy) What is energy? See Appendix Unit I-E, p. 41.

4) What food group gives us energy? (Place the word GO in the center circle on the Basic Three Chart.

MUSIC

4. The children should be encouraged to alu like (work together) in groups. Encourage them to ho'olohe (listen) to each other and to kōkua (help) the group achieve its goal.

5. Have each group share its compositions with the entire class. Combine these compositions into a class booklet so that each student has a copy.

Song

G. Theme: Aloha for others

Title: "'Ā, Aloha Mai"

Source: See Appendix Unit I-L, p. 51.

Preparation: Write the words on a chart.

Procedure:

1. Have the children identify the words they already know. Underline the familiar words with red ink.

2. Talk about aloha and welcoming people into the home or the classroom. Talk about warm feelings for others.

ART

8. Encourage the children to compose a story about their "Ideal Community." Have them describe why they feel this dream community is ideal.

D. Culmination

Have a long time resident of the community come in to class and talk to the children about what the community was like in the old days. Encourage him/her to bring old pictures if he/she has them. Encourage the children to talk to community people and ask them for pictures and information about the past. Set up a bulletin board display.

V. Mural

A. Theme: 'Ohana concepts in practice in the community

B. Materials: 36" x 72" wrapping paper, glue, scissors, scrap paper and fabric, paints, felt pens, buttons, seeds and other odds and ends.

C. Procedure:

1. Have the children plan how they are going to show the 'ohana concepts as discussed in social studies.

GAMES AND RECREATION

3. The team with the most points receives the mayor's recognition award (could be a certificate).

Game: Traffic patterns

1. Ask:

What are some street signs you remember seeing as you rode in cars and on buses?

2. List

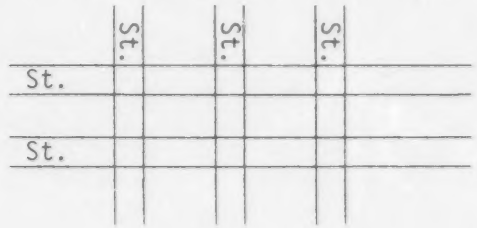
Make a list of signs.

3. Draw

Students select one of the signs to draw on a large manila drawing paper (18" x 24").

4. Glue the signs to packing carton boxes.

5. Form streets on the classroom floor or playground using lengths of rope, string, yarn, or tape.



SOCIAL STUDIES

e) If some of the businesses in your community failed or moved to another location, how would the 'ohana in the community cope with this disruption of community life? e.g., service station, grocery store.

10) Talk about the economic base(s) of your own community and hypothesize what might happen if certain situations occurred to disrupt the economic life., e.g.:

a) Suppose the truck drivers all went on strike, how would the farmers get their products to the market?

b) If the store owners refused to buy fish from the fisher, how would the fisher meet his/her other needs?

c) Introduce the concept of "shipping strike." Explain to the children what happens when a strike is called.

LANGUAGE ARTS

4. This activity can also be done on a checklist kind of format as shown in Appendix Unit I-G, p. 45.

Evaluation:

At the end of each week, discuss the frequency with which certain needs were fulfilled as noted in the diaries or checklists. Ask the children to draw some conclusions or make some generalizations about the interdependent nature of communities.

Speaking

Theme: When I grow up

Procedure:

1. Have the children think of a community role they would like to fulfill when they become adult citizens of the community. They have had some time now to study the variety of roles available and needed.

2. Have them prepare a little talk on what they want to be when they grow up and why they want to be that person.

3. Have them project what they need to do in order to become that person: schooling, training, etc.

HEALTH

e. Conduct the activities found in Appendix Unit I-E, p. 41.

f. Ask:

1) What kinds of food help us grow . . . our bones, our muscles, our tissues? (meats, dairy products, beans)

2) What plants or animals give us these foods?

g. Have available pictures of the animals and plants that give us the foods in this group. Place them on one side of a chart. As the children find pictures of foods we get from these animals and plants, paste them on the chart next to the correct animal. Introduce the new word for this group of foods--"GROW" and place it on the Basic Three chart.

h. To identify GLOW foods, have available a variety of clean, cut vegetables and fruits. Ask 3-6 volunteers to participate in a tasting party.

1) Blindfold each participant.

MUSIC

3. Introduce the new vocabulary in the song. (Use the school kupuna.) Explain that in early Hawai'i everyone was welcomed into the home by the phrase "E komo mai."

4. Sing the song for the children. Have them sing with you, one phrase at a time, making sure that their pronunciation is clear.

5. Make up motions for the song after the children have learned it well.

6. Encourage the children to share this song with others.

Song

H. Theme: Greetings

Title: "Hawai'i's Greetings"

Source: Hawai'i Music Program, Zone 1, Book B, p. 154.

Procedure:

1. Talk about the time of the day and how we greet people before noon, afternoon and at night.

2. Introduce the Hawaiian equivalent of the greetings during the day by using the posters in the collection, Nā Ki'i Ho'ona'auao, Series I.

ART

2. Make a list of the activities and then divide the class into mini 'ohana to work on developing their ideas. Encourage them to use the concepts as they plan their kuleana (responsibility). Encourage them to include as many community helpers as possible.

3. Help the children make up a title for the mural. Write each 'ohana concept on 3" x 8" cards. The children will use the cards to identify the concepts by tacking them on the part of the mural that demonstrates the concept. This can be an ongoing activity to create awareness of the Hawaiian concepts.

VI. Poster making

A. Theme: Campaign for good health

B. Materials: scraps of fabric, paper, construction paper, 24" x 36" oak tag, paint, brushes, marsh pens, colors.

C. Procedure:

1. Show the children samples of good posters.

2. Have them do some sketches for their posters on good health as discussed in health.

GAMES AND RECREATION

6. Place the signs at appropriate places along the streets.

7. Play

The students choose to be a vehicle (bus, car, truck) or a pedestrian. They must drive or walk along the streets following all the signs.

8. Discuss

When the need for police becomes obvious, stop the playing.

9. Ask:

What person in our community helps to keep people safe in traffic? Discuss what police officers do to keep people safe.

10. Play

Resume play with police added. The object for the drivers and pedestrians will be to avoid getting a traffic violation ticket.

Game: Fun in the neighborhood

1. Ask

SOCIAL STUDIES

d) If there were a shipping strike, how would we get our food and other needed products?

g. Culmination

1) Ask the children: Based on what we have studied, what are some of the general statements we can make about life in a community?

2) Name some of the 'ohana concepts you've learned in earlier years that are imperative in community living. See Appendix Unit I-N, p. 54, e.g.,

laulima - interdependence
kōkua - help
aloha - love, compassion
kuleana - responsibility and role
alu like - working together

3) Have the children further identify with these concepts by play acting situations that show these concepts in practice. Divide them into groups and have each group select a concept to role play.

LANGUAGE ARTS

4. Present the mini talks like a T.V. or radio program.

HEALTH

2) Place a cut vegetable in front of them.

3) Have them eat it and tell what it is they ate.

4) Continue with another vegetable. This time have them guess what it is using their sense of touch.

5) Continue using different senses.

Talk about glow foods and why they are important in the diet.

i. Hand out copies of Appendix I-F, p. 44.

1) Talk about the human body and how important it is to eat well so that the body can function well.

2) Encourage the children to keep a day's record of all the food they eat. Be sure to watch for GO, GLOW and GROW foods.

3) After a day, evaluate their eating habits.

MUSIC

3. Talk about "Aloha Kakahiaka" (good morning). Have the children study the chart and notice the work being done and time of the day.

4. Teach them the song using the 'ukulele as an accompaniment.

5. Pin the wall chart on the bulletin board and continue with "Aloha 'Auinalā" (good afternoon) and "Aloha Ahiahi" (good evening).

6. Encourage the children to share these greetings with others in school, in the neighborhood, and at home. This is a good song to sing at the beginning and end of each school day.

Chants and songs

I. Theme: Greeting and showing aloha to others

Chant title: Aloha

Source: Personal compositions

1. The children now have some experience with chanting, so have them write a simple chant for greeting each other:

ART

3. Conduct a lesson on lettering. Encourage them to use brief but effective titles.

4. Mount the completed posters.

GAMES AND RECREATION

a. What kinds of things do you do with your free time?

b. How much T.V. do you watch?

c. What kinds of activities could you do if there were no T.V.? Encourage them to think of physical activities.

d. What do you suppose the children who lived in Hawai'i long ago used to do? Did they play the same kinds of games you play today?

e. What about the children in other countries that have no T.V.? What do those children do?

2. Introduce four simple Hawaiian activities the children in early Hawai'i used to do in their kauhale (living compound). See Mitchell, Hawaiian Games for Today, pp. 68-69.

a. Pahi-pahi

This game is similar to today's "peas porridge hot."

1) Have the children sit with a partner

SOCIAL STUDIES	LANGUAGE ARTS	HEALTH
4) Here are some sample situations. The concepts are: kōkua, laulima, alu like, kuleana, aloha. a) A community has workers who help people (kōkua). b) People in a community depend on other people in the community for goods and services (laulima). c) People in a community work together (alu like) to meet the needs of each other. d) People in a community have certain roles and responsibilities to perform (kuleana). e) Everyone in a community needs aloha (love) and ʻike (recognition). These are needs that can be met by the ʻohana and by others in the community.		j. Write the word "nutritionist" on the chart. Have the children predict what the responsibilities of this community helper are. k. Have the children look up the meaning of the word. Discuss the responsibilities of a nutritionist and write the information in the correct column. l. Invite a nutritionist to describe his/her responsibilities and roles within the community. Plan a discussion period so the children can ask questions about proper nutrition. m. These kinds of inquiries can be continued to include other community people dealing with health like doctors dentists nurses orthodontists sanitation workers sewage treatment planners water system workers vector control workers
87		88

MUSIC

Aloha, e nā hoa aloha
Aloha, e ke kumu
Aloha kakahiaka
Aloha mai
(Greetings, friends
Greetings, teacher
Good morning
Welcome)

2. Encourage them to greet community people by chanting. This could be a fun activity for everyone.

3. Have the children chant to the beat of ipu (gourds), kāla'au (dancing sticks), kā'eke'eke (bamboo pipes) or pū'ili (split bamboo). Encourage the children to create rhythmic patterns that go along with the chants they create.

Culmination:

Plan a hō'ike (show and tell) for the school. The children will be able to share the songs and chants they have composed and learned throughout the year.

89

ART

GAMES AND RECREATION

2) Using any one of the chants they've learned in music, have them create motions using thigh and hand slapping patterns.

b. Pe'e-pe'e-kua (Hide and seek)

1) This hide and seek game is similar to that played today. A variation can be played by having each person assigned the role of a community helper named in Hawaiian.

2) As each person is discovered by the haku (master), he/she announces his/her Hawaiian job title, e.g., Lawai'a. The haku has to be able to translate it into English. If the haku translates correctly, he/she earns one plus point. If the haku is wrong, one point is counted against him/her.

90

SOCIAL STUDIES	LANGUAGE ARTS	HEALTH
		n. Expose the children to as many of the community helpers as possible to build awareness. o. Compose charts for each health worker that show what they do to help keep the neighborhood healthy and clean. Culmination Have the children choose a community helper who deals with food or health. Have them plan a campaign for Good Health. Posters can be made in art. Campaign speeches can be planned in language arts.
91		92

MUSIC	ART	GAMES AND RECREATION

3) The haku has to total more plus points than negative ones in order to become a player in the next game. When the haku becomes a player, he/she may select the next haku.

c. Kuwala Po'o/Kuala Po'o (somersaults)

Program IX, pp. 75-82 in Leaps and Bounds, A Guide for ETV Movement Education series describes some excellent sequential lessons in tumbling.

1) Describe the somersaulting techniques done by the early Hawaiians. (See Mitchell. Hawaiian Games for Today, p. 68.)

2) Have the children predict why they think somersaulting is good for their bodies.

3) If possible, view the ETV series with the children so they can see the movements.

Evaluation:

Have the children keep a diary of their free time activities for a week at a time. Watch for improvement in the use of free-time.

Nā 'Oihana Like 'Ole

(The Various Professions)

Teacher - kumu

Principal - po'o kumu

Custodian - kanaka mālama kula

Doctor - kauka

Lawyer - loio

Nurse - kahu ma'i

Cook - mea kuke

Letter Carrier - kanaka lawe leka

Firefighter - kanaka kinai ahi

Telephone Repairer - kanaka ho'oponopono kelepona

Waiter - kuene

Waitress - kuene wahine

Stevedore - kipikoa

Dentist - kauka niho

Salesperson - kālepa; mea kū'ai aku

Housekeeper - mea mālama hale

Orthodontist - kauka niho

Professor - polopeka

Police Officer - māka'i

Secretary - kākau 'ōlelo

Bus Driver - mea kalaiwa ka'a 'ōhua

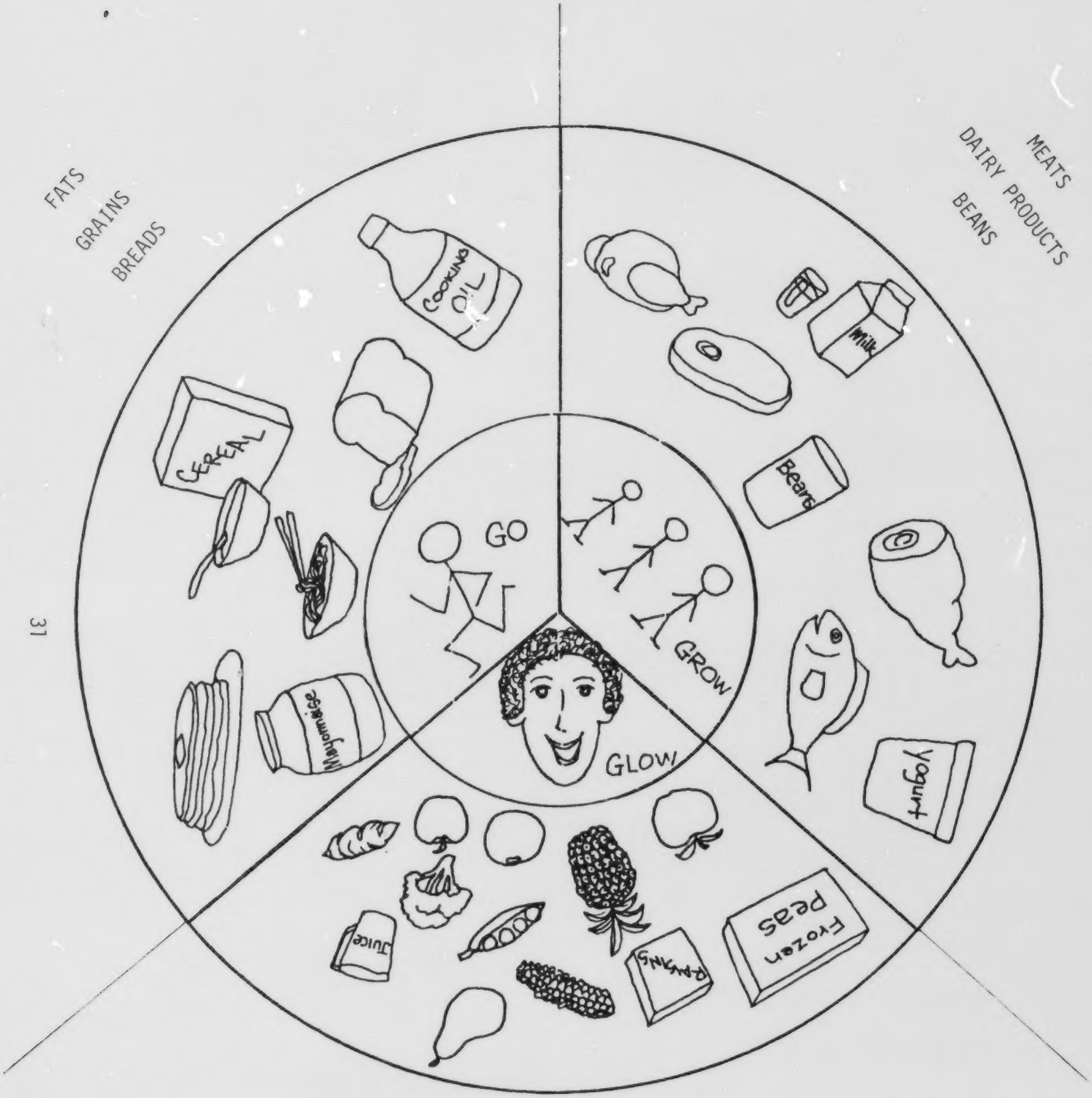
Cashier - mea 'ohi kālā

Babysitter - kahu mālama kamaiki

Nutritionist - mea ho'oponopono mea'ai

Cafeteria Manager - kahu hale 'aina

Grow, Glow, and Go Foods



Nutrition Education Teacher's Guide (Draft). DOE, State of Hawaii, June 1982.

Maika'i, Mahi'ai!

In Hawai'i long, long ago there lived Mahi'ai, a keikikāne. He had an 'ohana just as you do. But in his 'ohana were his two older brothers, two younger sisters, his makua kāne, makuahine, kūpuna and many aunts, uncles and cousins. Some of his 'ohana lived near the lo'i kalo (taro patches). Some lived near the kahakai (beach).

Mahi'ai and his family rose early each morning starting their day's activities while it was cool. Today was special because Mahi'ai's makua kāne (father) was going to let him join all the other men and older boys. They were going to work in the lo'i kalo. He no longer needed to stay with his sisters. He could help in the kalo patch just like Kekoa and Keola, his older brothers!

Mahi'ai was the first one ready to go because he was too excited to sleep and had gotten up very early. Everyone had fun yesterday trampling in the mud of the lo'i. Now, it was planting day for men and older boys only. Mahi'ai raced ahead toward the field. Today Mahi'ai was not the water-carrying keiki but a working kāne!

When they all got to the fields the leader of the planting offered a prayer to the gods. He prayed that they would help the young kalo plants grow big and strong. He prayed that they would be able to harvest a good crop. After the prayer the workers began planting. Mahi'ai's makua kāne told him that his job was to bring the huli (plant cuttings) to the men who would plant them in straight rows. Mahi'ai had to run along the lo'i kalo with the bundles of huli and pass them to the planters. At first, Mahi'ai ran very quickly. As the sun rose higher in the sky, his running slowed down. The day became warmer and warmer. Mahi'ai grew more and more tired. He took a sip of water from the water gourd making sure not to drink more than his share. His father and brothers needed a drink too.

Everyone kept right on working and it seemed to Mahi'ai that they did not slow down. He did not know how long he could keep up, but he knew that he could not stop or his brothers would see how tired he was. His father might not let him work in the fields with them anymore. Aūe! Just when he thought he could not lift another bundle, he saw his sisters come with their lunch. Everyone stopped to eat! 'Ono! Mahi'ai was so hungry! After eating, he felt like sleeping. But everyone went quickly back to work. Mahi'ai watched his sisters walking back toward their kauhale and for a minute wished he could go with them. They would probably go to the beach for a swim or play in the stream among the rocks.

"Hele mai, Mahi'ai!" Keola was waiting for more huli. Auē! Mahi'ai gathered up his bundle of huli and ran toward his brother.

At long last, the planting was finished. Mahi'ai was not sure he could walk home. He was exhausted! His brother Kekoa saw his dragging footsteps and hoisted him upon his shoulders. "Maika'i, Mahi'ai!" "You worked well today." Mahi'ai felt a burst of pride but he was too tired to say anything and promptly fell asleep atop his brother's shoulders.

"Mahi'ai, Mahi'ai, it's time to eat," said Keola. Mahi'ai awakened and hurriedly went to the hale mua where all the other men of the 'ohana were gathered. Once inside the hale mua, the men's eating house, Mahi'ai's makua kane offered a prayer to the 'aumākua asking for help to make the kalo plants grow well and thanking them for the fine planting day. This was Mahi'ai's first meal with the men. He felt so proud; he no longer needed to eat with the women and younger children.

After eating, Mahi'ai had a new job. He needed to help clean the eating utensils (bowls, cups, spoons). He put them away and ran to the hale noa (sleeping house). Each night his new job was getting the kukui nuts on the nī'au (coconut mid-rib) and placing the nī'au into the stone holder. This ihoiho kukui (candle-nut lamp) provided the light for his kupuna kāne (grandfather) who told stories of the 'ohana, powerful gods, and great ali'i. Soon it was time to sleep. Mahi'ai put out the light and went to sleep. He slept smiling as he remembered his brother's praise, "Maika'i, Mahi'ai!"

By - Marilyn Okumura

Members of an 'Ohana:

Kupuna - grandparent (pl., kūpuna)
- kupuna kāne - grandfather, granduncle, male ancestor
- kupuna wahine - grandmother, grandaunt, female ancestor

Makua - parent, any relative of the parent's generation (pl., mākua)
- makua kāne - father, uncle, any male relative of the parent's generation
- makuahine - mother, aunt, any female relative of the parent's generation

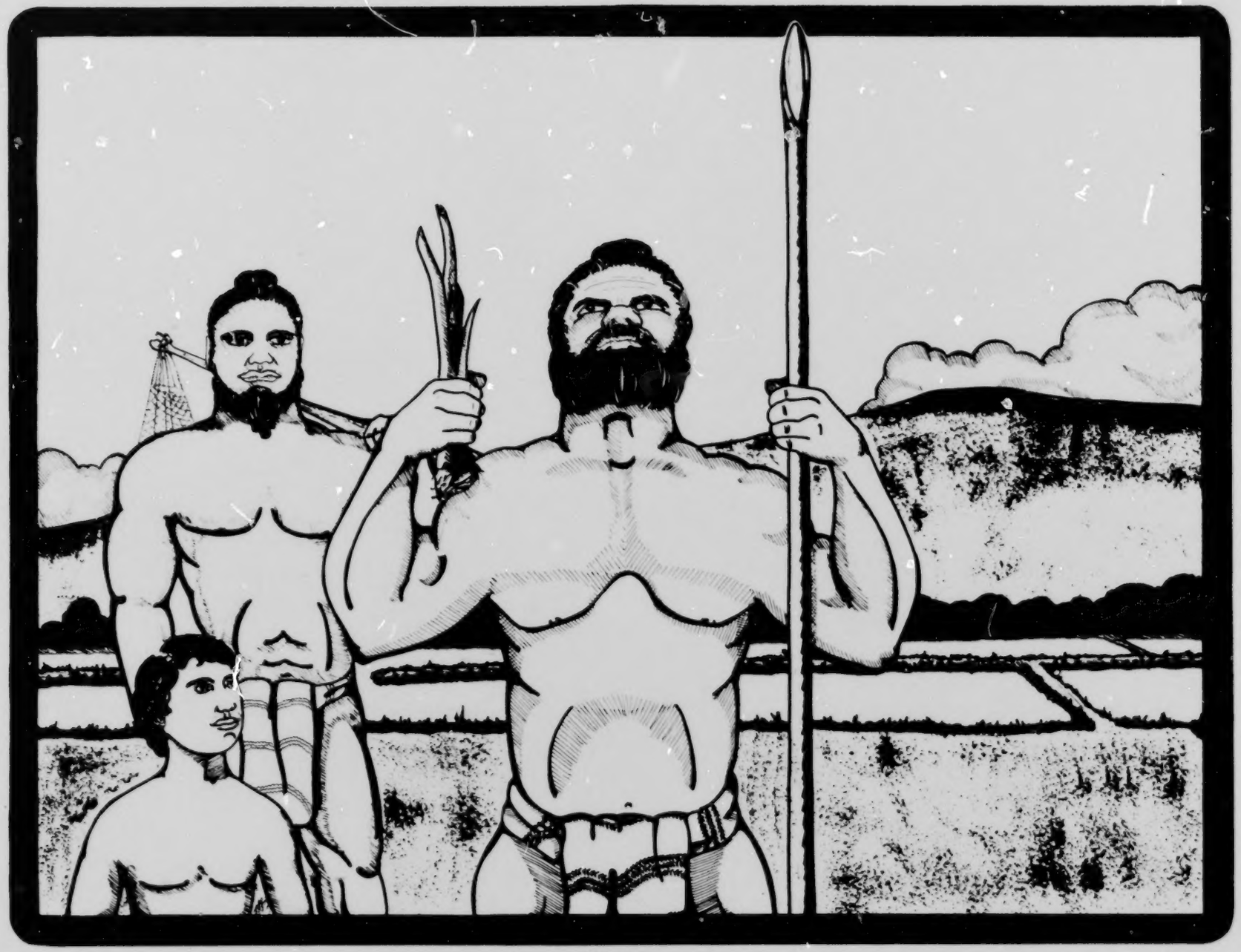
Keiki kāne - son, boy
Kaikamahine - daughter, girl (pl., kaikamāhine)

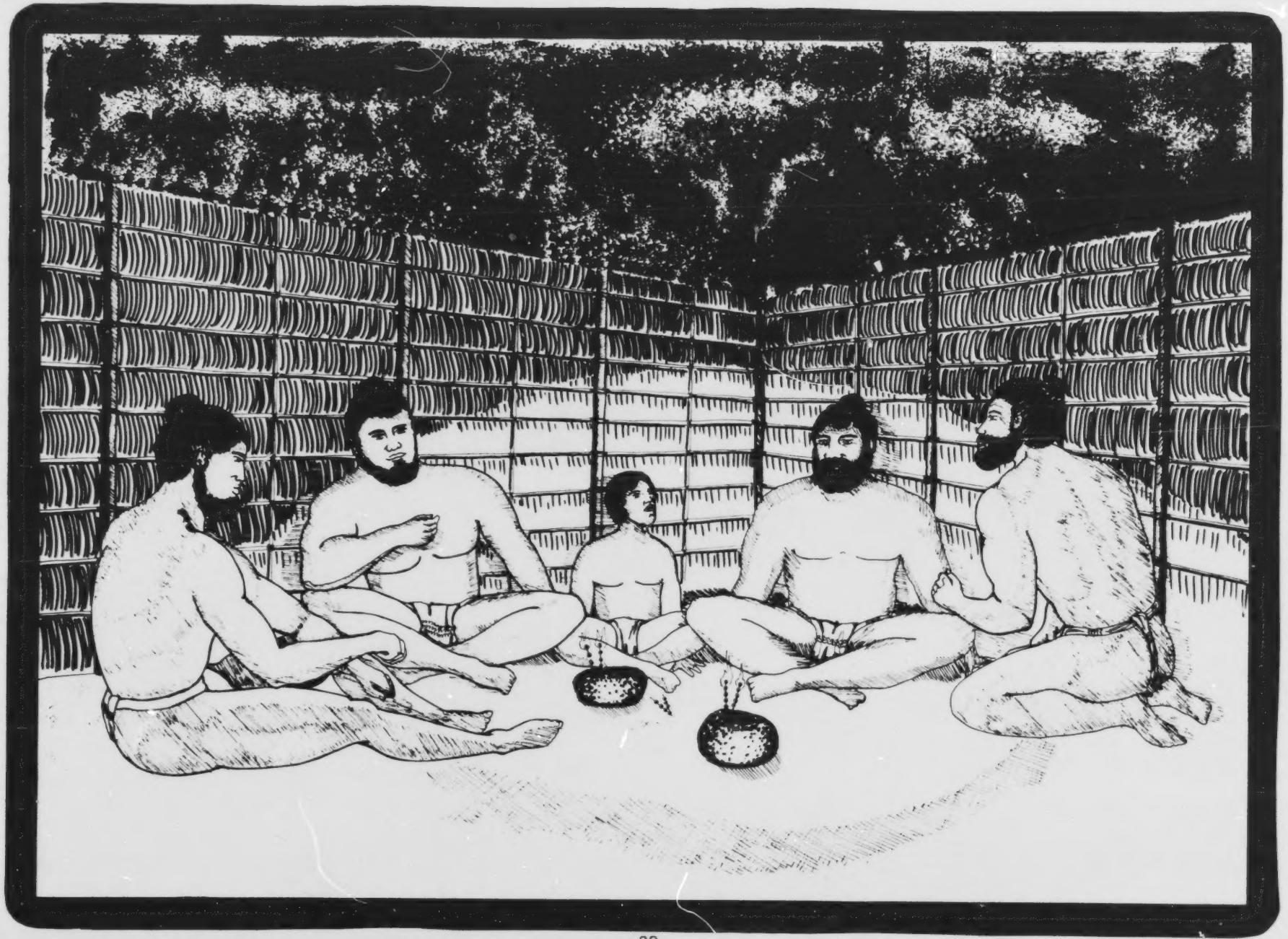
Mo'opuna - grandchild
- mo'opuna kāne - male grandchild
- mo'opuna wahine - female grandchild

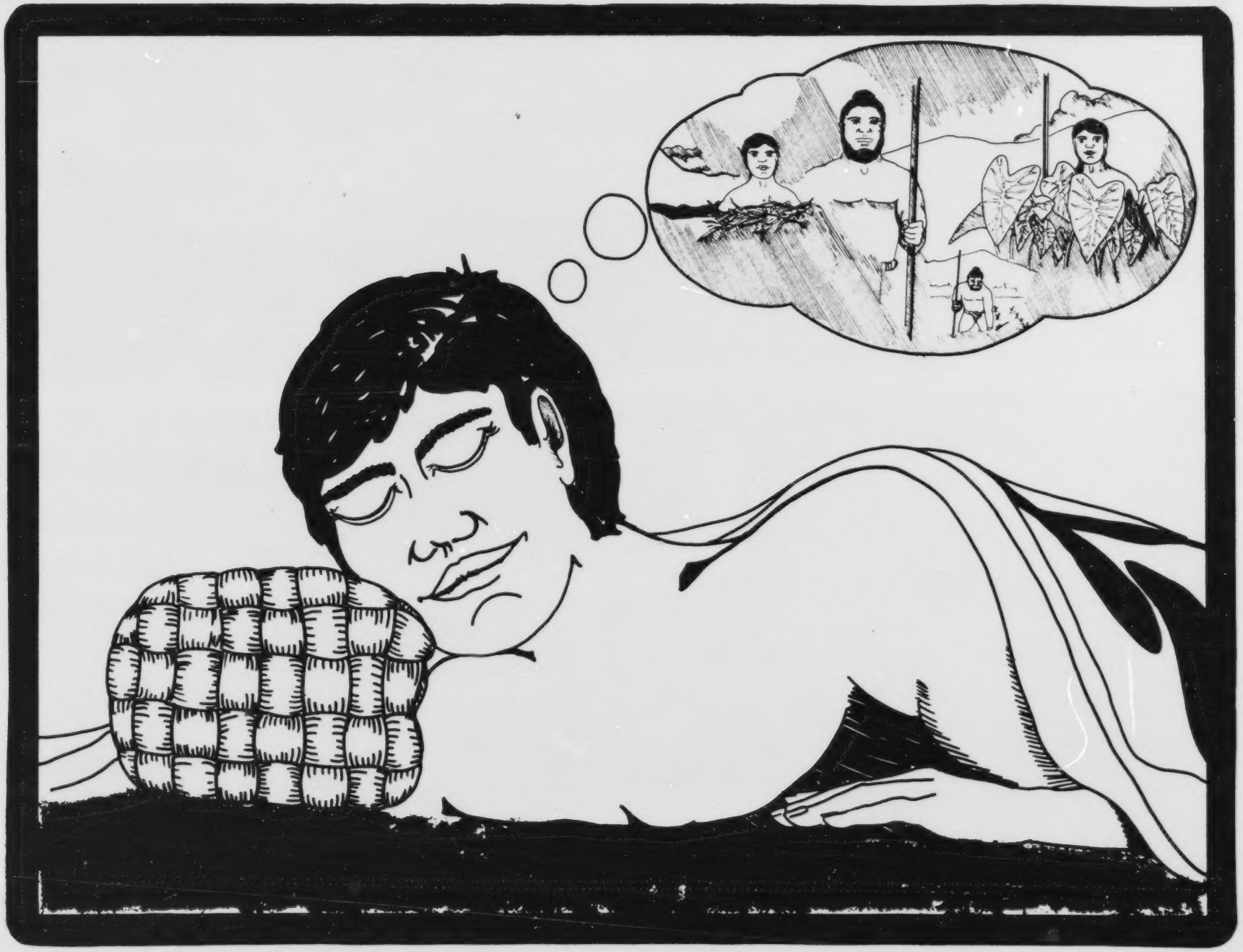
Kamali'i - children
Kamaiki - baby

'Ohana Concepts in the story

aloha	love
alu like	united effort
kōkua	help
kuleana	role/responsibility
laulima	cooperation
lōkahi	harmony
lokomaika'i	goodness/kindness
pa'ahana	industriousness
'ike	recognition







112

113

KAUHALE

ENERGY IN OUR LIVES

Activity: Define energy as something that can make things move or get them hot.

Materials: 1 Worksheet/student (Energy in Our Lives).

Suggested Procedure:

The term energy has technical meanings that are expressed as the ability to move or heat objects. At this early point in a student's development these technical meanings are difficult to grasp. However, since the word energy is used so frequently in many contexts, including nutrition, it is important to establish a definition for the word.

At this point we will talk about things that have energy. Over time, students will learn that all things possess energy in some form.

Procedure:

1. Explain to the students that we want to talk about (define) a very important word, energy. Get students' ideas about the word.

2. Use the worksheet. Explain that energy can make something hot and/or move it. We say things have energy when they can make another thing hot or move it.

3. Go over each picture. Does the thing shown have energy? Can it heat something? Frame the block around those things that can heat something in red. Can it move something? Frame the block for those things that can move something in yellow.

4. Draw a picture in the box of something that energy can heat or can move.

Suggested Questions:

- Which of the things shown have energy? (All of them)
- How do we get energy from gasoline? (Burn it)
- How do we get energy out of our arms? (Move them)

Generalization:

Have students take any object, stick, eraser, chalk. Ask how they can give it energy. (The object can then heat something up or move something.) Have them note that if we move a thing, while that thing is moving it can move something else. A baseball, when it strikes a window, will cause that window to noticeably move or break. When we heat a thing, the heated object can heat something else. A heated pan heats our hand when we touch it.

Have students make a bulletin board display showing things that have energy.

Mnemonic Device:

The following set of couplets may help keep the nature of energy in mind. The first and last couplets are most important.

Energy it takes to move a car.
Energy it takes to heat a star.

Energy is in everything that grows.
Energy is in everything that glows.

Energy we find in oil from the ground.
Energy we find in a horn making a sound.

Energy comes from the light of our sun.
Energy comes from wheat from a bun.

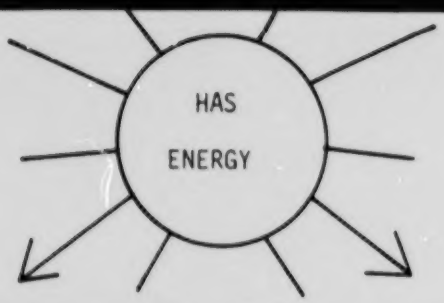
Energy is all that we eat.
Energy is all motion and heat.

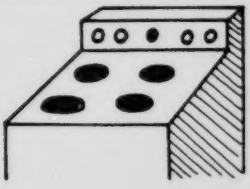
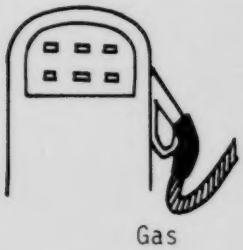
Source: Nutrition Education Teacher's Guide (Draft). DOE, State of Hawaii, June, 1982.

ENERGY

IN OUR

LIVES



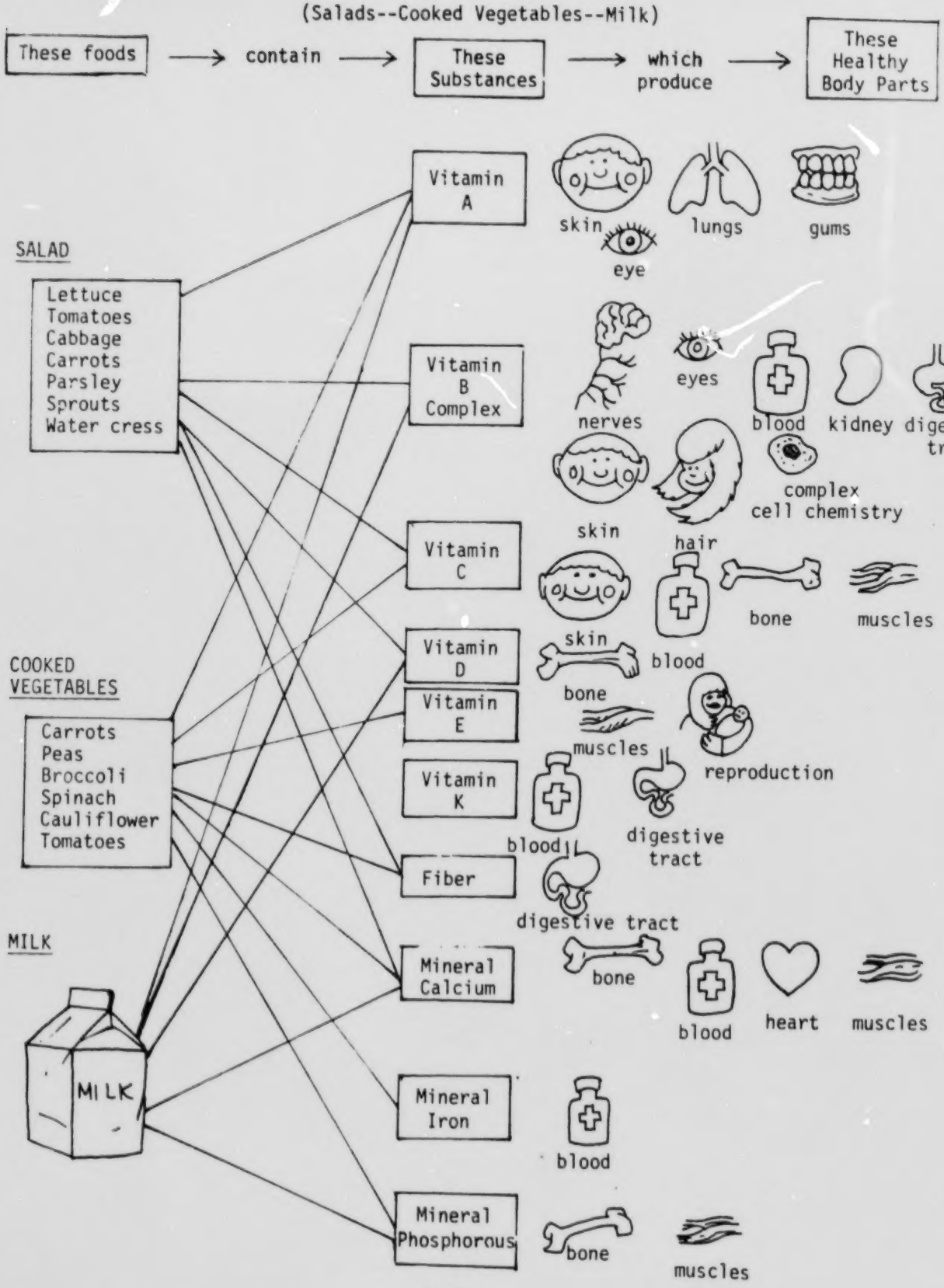
	Can Make Things Hot	Can Make Things Move
Fire		
 Stove		
Arm		
 Gas		
Horse		

43

2-3

Nutrition Fact Sheet

(Salads--Cooked Vegetables--Milk)



2-17

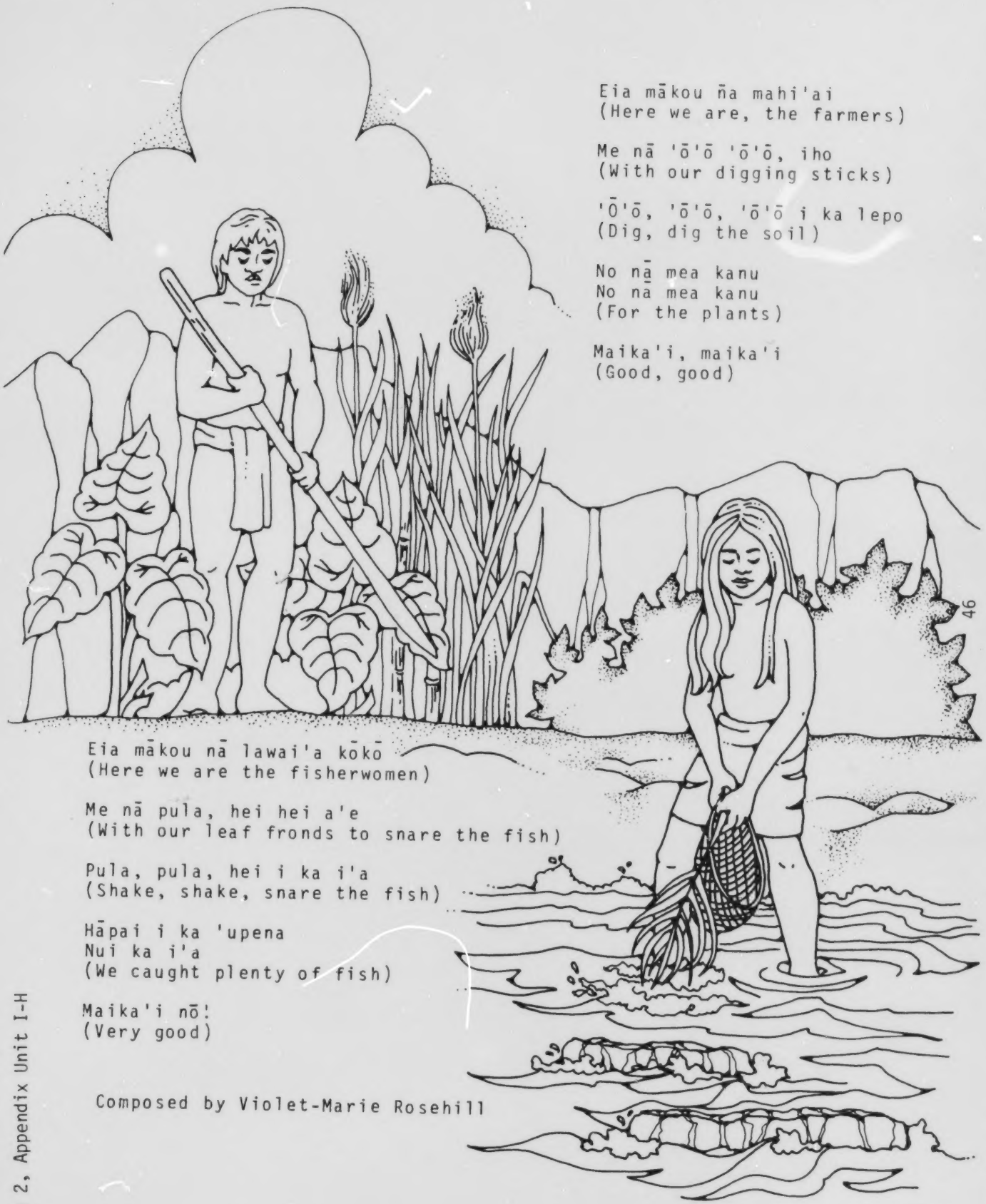
44

Grade 2, Appendix Unit I-F

CHECKLIST

Date	Service(s) Received	Service(s) Rendered	
E.g.: Sept. 9	X X X	X	Fast foods place for breakfast. Snack shoppe for ice cream. Service station for gas. Helped my sister cross the street.

"Eia Mākou Nā Mahi'ai"



Eia mākou ña mahi'ai
(Here we are, the farmers)

Me nā 'ō'ō 'ō'ō, iho
(With our digging sticks)

'Ō'ō, 'ō'ō, 'ō'ō i ka lepo
(Dig, dig the soil)

No nā mea kanu
No nā mea kanu
(For the plants)

Maika'i, maika'i
(Good, good)

Eia mākou nā lawai'a kōkō
(Here we are the fisherwomen)

Me nā pula, hei hei a'e
(With our leaf fronds to snare the fish)

Pula, pula, hei i ka i'a
(Shake, shake, snare the fish)

Hāpai i ka 'upena
Nui ka i'a
(We caught plenty of fish)

Maika'i nō!
(Very good)

Composed by Violet-Marie Rosehill

46

Grade 2, Appendix Unit I-H

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HE KINO MAIKA'I NŌ

Tune: Alouette
Lyrics: Hawaiian Studies State Staff

1.	F Eia ku'u kino	Here is my body
	C7 F Ihu, maka, waha	Nose, eyes, mouth
	Eia ku'u wāwae	Here is my feet
	C7 F Ku 'eku'e wāwae	Ankles
	Po'ohiwi, 'ōpū	Shoulders, stomach
	C7 F Pēpeiao, piko	Ears, navel
	C7 Papakole (kīkala)	Buttocks (hips)
	Umauma (waha nui) e	Chest (big mouth)
	F Eia ku'u kino	Here is my body
	C7 F Maika'i nō!	Nice indeed!
2.	F C7 F Lauoho, Lehelehe, niho	Hair, lips, teeth
	Pāpālina, C7 me nā 'ūhā F	Cheeks, with the thighs
	Kīkala, kuli	Hips, knees
	C7 F Me nā papakole	With the buttocks
	C7 Manamana lima	Fingers
	Manamana wāwae e	Toes
	F Eia ku'u kino	Here is my body
	C7 F Maika'i nō!	Nice indeed!

Nā Māhele o Ke Kino
(The parts of the body)

Ho'omākaukau - Get ready

Kāhea - Call out (chant the first line)

Pā - Begin

Kahi, lua, kolu, hā - po'o (head). (One, two, three, four)	Both hands touch the head.
Kahi, lua, kolu, hā - maka (eye).	Both hands touch the eyes.
Kahi, lua, kolu, hā - ihu (nose).	Both hands touch the nose.
Kahi, lua, kolu, hā - pepeiao (ear).	Both hands touch the ears.
Kahi, lua, kolu, hā - waha (mouth).	Both hands touch the mouth.
Kahi, lua, kolu, hā - po'ohiwi (shoulder).	Both hands touch the shoulders.
Kahi, lua, kolu, hā - lima (hand).	Hands extended, palms up.
Kahi, lua, kolu, hā - manamana lima (fingers).	Wiggle fingers.
Kahi, lua, kolu, hā - wāwae (foot).	Sit back, kick feet up.
Kahi, lua, kolu, hā - manamana wāwae (toes).	Wiggle toes.

Ho'omāka'ika'i/Explorations 1973, p. 59.
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Ke Kino o Ke Kanaka
(The Human Body)

kīkala	hips
ku'eku'e lima	elbow
ku'eku'e wāwae	ankle
kuli	knee
lauoho	hair
lehelehe	lip(s)
manamana lima	finger(s)
manamana wāwae	toe(s)
niho	tooth/teeth
papālina	cheek(s)
piko	navel
umauma	chest
'ōpū	stomach
'ūhā	thighs, lap

See the accompanying picture of "Ke Kino o Ke Kanaka" which is a reduction of the body poster in Nā Ki'i Ho'ona'auao/ Hawaiian Studies Instructional Visuals, Series I. Laminate the poster. Have the children write the names of the body parts using a non-permanent marker or reusable signs which can be taped to the poster.

Nā 'Oihana Like 'Ole

Sung to the Tune of: "Farmer in the Dell"

Farmer:
F
Kanaka mahi'ai, Kanaka mahi'ai,
C7 F
Aloha kāua, Kanaka mahi'ai.

The farmer, the farmer,
We (two) love the farmer.

Dentist:
F
'O ke kauka niho, 'O ke kauka niho,
C7 F
Nani nō nā niho, 'O ke kauka niho.

The dentist, the dentist,
The teeth are lovely (because of) the dentist.

Custodian:
F
Kanaka mālama kula, Kanaka mālama kula,
C7 F
Nui kāna hana, Kanaka mālama kula.

The custodian, the custodian,
He/She does a lot of work, the custodian.

Firefighter:
F
Kanaka kinai ahi, Kanaka kinai ahi,
C7 F
He kanaka koa, Kanaka kinai ahi.

The firefighter, the firefighter,
He/She is a brave person, the firefighter.

Baby-sitter:
F
Kahu mālama keiki, Kahu mālama keiki,
C7 F
Nui ko'u aloha iā ia, Kahu mālama keiki.

The baby-sitter, the baby-sitter,
I really love her/him, the baby-sitter.

Sung to the Tune of: "Old MacDonald Had a Farm"

```
F                Bb    F
Mai maka'u i ke kauka niho
              C7     F
Mino'aka, mino'aka e
                        Bb              F
He checks our waha and cares for our niho
                       F
Mino'aka, mino'aka e.
```

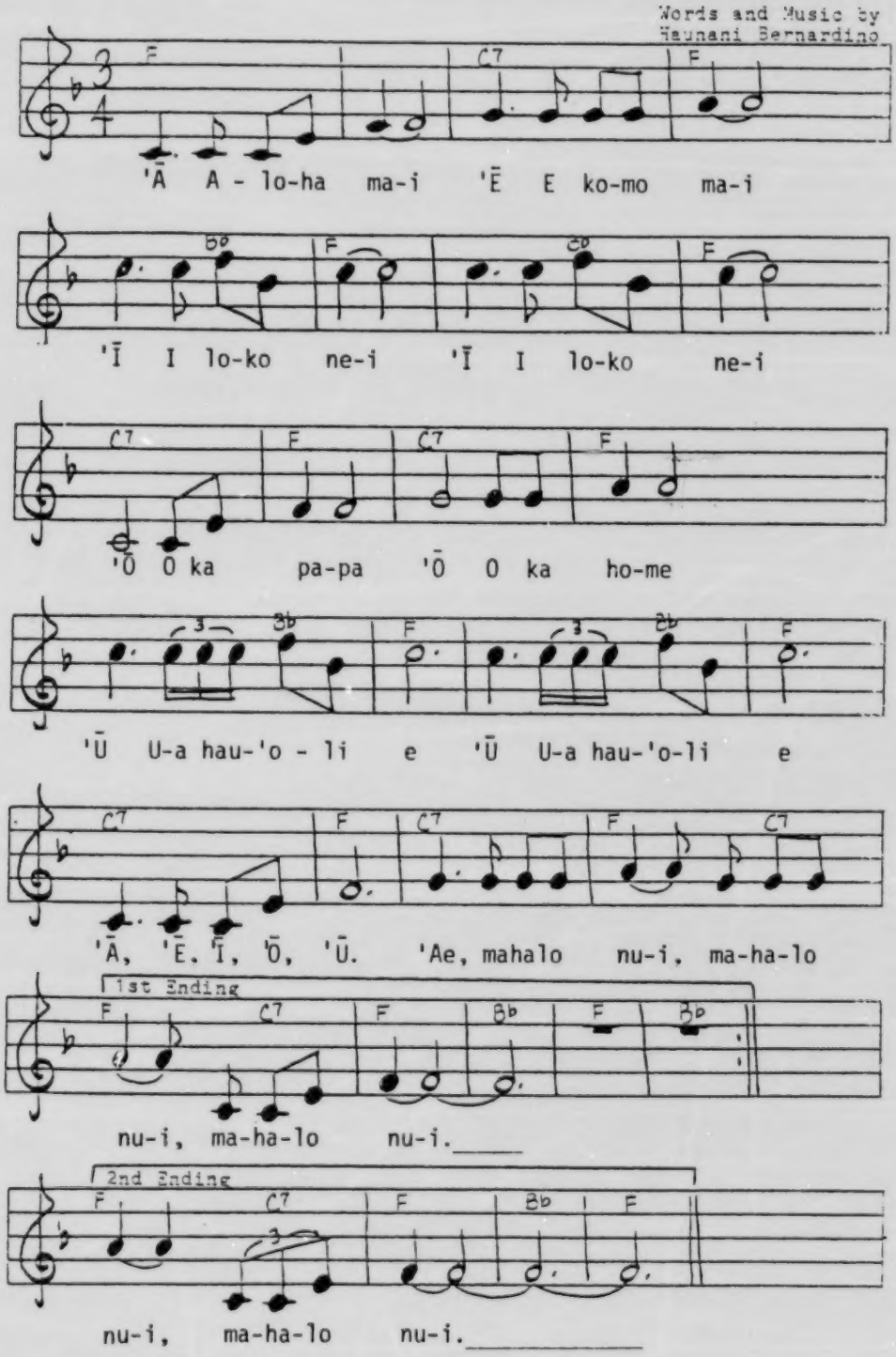
Don't be afraid of the dentist
Smile, smile
He checks our mouths and cares for our teeth
Smile, smile.

With a mino'aka here, and a mino'aka there,
Here an 'aka, there an 'aka,
Everywhere an 'aka'aka

```
                  Bb    F
Mai maka'u i ke kauka niho
              C7     F
Mino'aka, mino'aka e.
```

With a smile here, and a smile there,
Here a laugh, there a laugh,
Everywhere a laugh, laugh
Don't be afraid of the dentist
Smile, smile.

ʻĀ, ALOHA MAI

Words and Music by
Haunani Bernardino

ʻĀ A - lo-ha ma-i ʻĒ E ko-mo ma-i
ʻĪ I lo-ko ne-i ʻĪ I lo-ko ne-i
ʻŌ O ka pa-pa ʻŌ O ka ho-me
ʻŪ U-a hau-ʻo - li e ʻŪ U-a hau-ʻo-li e
ʻĀ, ʻĒ, ʻĪ, ʻŌ, ʻŪ. ʻAe, mahalo nu-i, ma-ha-lo
1st Ending
nu-i, ma-ha-lo nu-i.
2nd Ending
nu-i, ma-ha-lo nu-i.

Transcribed by: P. Pang, 1982

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'OHANA

by Māhealani Pescaia
Institute for Hawaiian Culture Studies

"Members of the 'ohana, like taro shoots, are all from the same root," says Mary K. Pūku'i.

Kalo, the corm of the taro plant, was the "staff of life" in the Hawaiian diet. It was also closely linked to the origin of the people with the birth of Hāloa. See the story of Hāloa in Grades K-1 Appendix Unit II-B, p. 113.

'Ohana included those born with blood ties, those who were unrelated but accepted by the 'ohana, and those who died and remained spiritual ancestors of the 'ohana. It included the:

'aumakua	spiritual ancestors
kūpuna kualua	great, great grandparents
kūpuna kuakahi	great grandparents
kūpuna	grandparents and all relatives of the grandparent generation
kūpuna kāne	grandfather
kūpuna wahine	grandmother
mākua	parents and relatives of the parent generation (aunts and uncles)
mākua kāne	father (uncle)
mākuahine	mother (aunty)
keiki	first cousins within the 'ohana or hānai (adopted)

The 'ohana was the unit that provided for the social, economic, and educational needs. The 'ohana who lived in the uplands shared kalo (taro), mai'a (banana), and 'uala (sweet potato) with their 'ohana by the seashore who in turn gave them products from the sea. The entire 'ohana showed up to help an 'ohana member build a hale (house).

The mākua performed the daily work of the 'ohana. They worked in the lo'i kalo (taro fields), caught fish, and performed the daily tasks necessary for survival. They bore nā keiki (the children) to continue the family line.

Nā keiki were given responsibilities too. They took care of the aged members of the 'ohana and helped their mākua by carrying food, water and materials for building houses, canoes, etc. Nā keiki were sometimes hānai (adopted). Nā mākua sometimes gave a baby to a close relative as a sign of aloha (love). This was usually done only within an 'ohana so that the keiki grew up knowing his/her real parents.

Nā keiki in an 'ohana grew up having many mākua to care for them. The 'ohana provided the emotional support, love and security to the child especially when he/she lost his/her parents or was reprimanded by them. Each child grew up with a feeling of well-being, acceptance, self-identify and self-worth.

The kūpuna (grandparents) were dearly loved and revered by the 'ohana. They were the source of wisdom and understanding. The oldest kūpuna usually was the hānau mua (first born) or haku (head) of the 'ohana. He/she settled problems and called the 'ohana meetings. These kūpuna took care of the little children in the 'ohana while the mākua worked. They developed close ties with their mo'opuna (grandchildren), especially with the oldest. They were the teachers of the 'ohana and taught planting, fishing, housebuilding and weaving. They taught the chants, wise sayings, stories, genealogies and customs. Those children who showed special talents were sent to special kāhuna (experts) or kumu (teachers) for instruction.

The 'aumākua were the ancestors who remained members of the 'ohana in spirit form. They were guardians and provided strength, inspiration and help. They appeared to members of the 'ohana as sharks, birds, lizards, eels, fish, rocks or plants. They were a real part of the Hawaiian 'ohana then, and still are in some 'ohana today.

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Pūku'i, Mary K. et al., Nānā I Ke Kumu. Honolulu: Hui Hānai, 1972.

CONCEPTS OF SELF AND 'OHANA

by Māhealani Pescaia
Institute for Hawaiian Culture Studies

Aloha, e nā kumu!

As educators, our main goal is to equip our students with the tools of survival that will help them live happy and successful lives. In order to do this we need to educate the total person. Each student needs to gain understanding and knowledge not only of content areas but also of himself or herself and others.

This appendix is for you to examine and to learn more about working with children and people in general. Understanding yourselves and others can help you be more effective teachers and human beings.

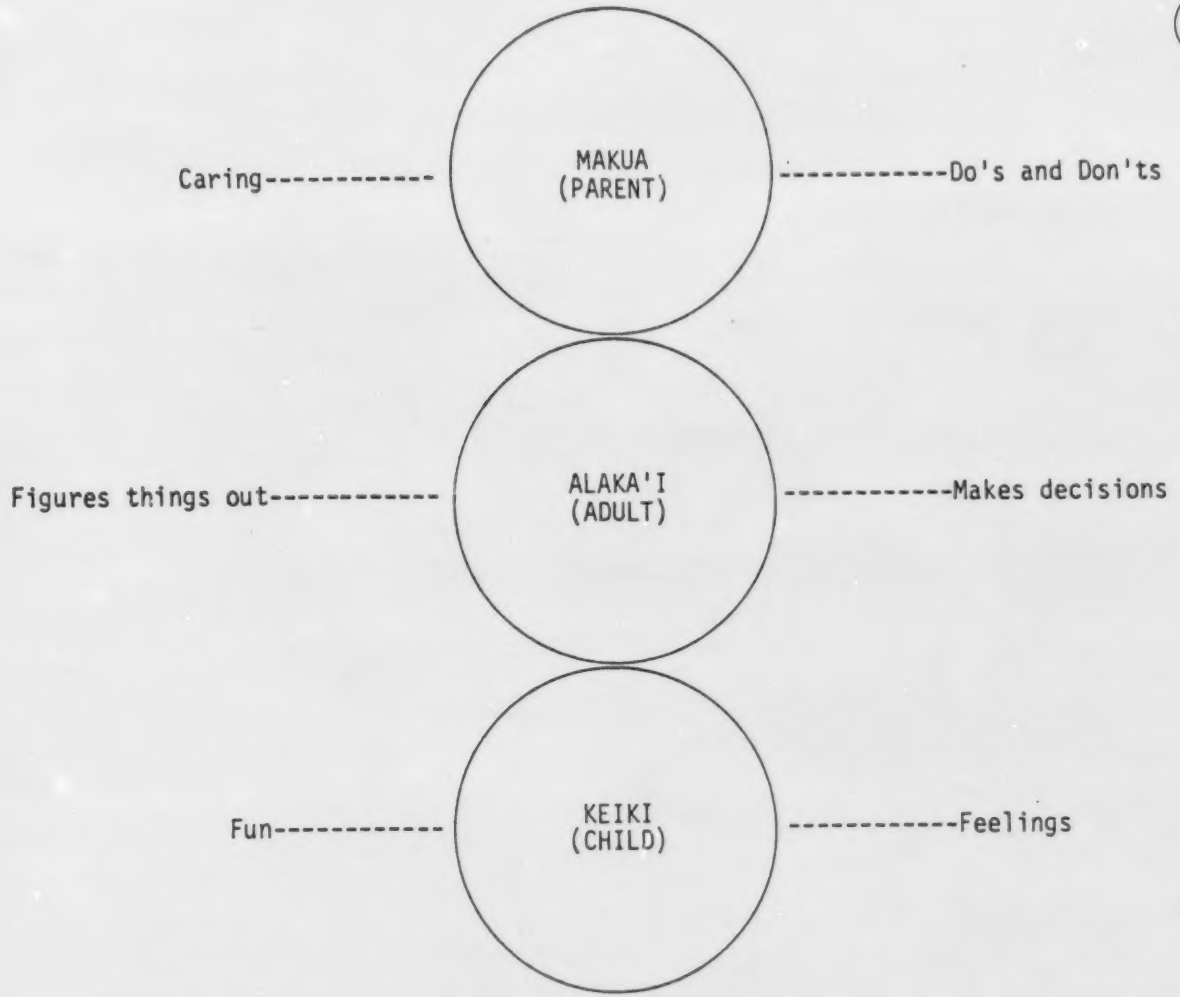
There is a need today for parents and teachers to give each child positive recognition. Often this recognition is missing in the home so the school environment is a major source. A positive classroom environment can build positive self-concepts that will lead to an atmosphere conducive to learning. Often within a busy day of meeting our academic objectives, we often neglect to develop the "whole person." We set our goals geared to the average and neglect the emotional and intellectual needs of the two extremes. We are drawn to the needs of the verbal, and fail to recognize the needs of the "quiet and well behaved."

The information compiled in these pages combines information from Games People Play by Dr. Eric Berne and from Nānā I Ke Kumu, I, by Mary K. Pūku'i. I hope it will provide you with "tools" as you work with your students.

I would like to thank Mālie Mossman, Counselor at Windard Community College, for her mana'o (ideas) in this area and for sharing some of her materials.

NOTE: It should be understood that the underlying philosophy contained in the section called "The Three Me's," is NOT a traditional Hawaiian cultural philosophy but rather the adaptation of a modern American psychological perspective redressed in Hawaiian terminology.

Inside each one of us there are THREE ME'S. These three me's influence what we do and each one acts and reacts differently.



Makua is the Hawaiian word for parent. The makua part of us reflects the things we learn from our parents or the people who brought us up. They taught us how to do things and how not to do things; and we learned by just watching how they talked to each other and how they treated us.

There are two parts to our makua. One part is critical or bossy, reminding us of the things we should or should not do. The other part is caring, encouraging us to show love and affection, such as kōkua, laulima, and aloha.

Anytime we behave like parents, we are using our makua. Phrases like "don't do that", "clean your room", "behave yourself", "don't worry", "I'll take care of you", "let me help you" are all makua kinds of phrases.

'O AU KA MAKUA
(ME, THE PARENT)

ME, THE ALAKA'I

Alaka'i is the Hawaiian word for director. This is the part of us that thinks and figures things out. The alaka'i part of us gets the facts, examines them, and speaks logically and rationally. It is said that the human brain can handle over one billion bits of information which is more than any computer can handle. We see, then, that we can learn anything our alaka'i decides to learn. Sometimes the makua or the keiki parts of us can inhibit us from learning effectively. Now that we know this, we can watch out for the keiki and makua and make sure that doesn't happen. The more things we learn about people and the world around us, the stronger our alaka'i becomes and the better decisions we can make. As we are reading this, we are using our alaka'i. When we examine and evaluate and use words like how, what, where, why and better, nicer, easier, we are using our alaka'i.

ʻO AU KE KANAKA NOʻONOʻO
(ME, THE ADULT THINKER)
ALAKAʻI

Keiki is the Hawaiian word for child. The keiki is the part of us that expresses feelings of fear, anger, happiness, or sadness. The keiki part of us also likes to have fun. Sometimes we let the keiki run wild like staying up too late, eating too much candy, or fighting. We need to use our alaka'i and makua to guide us so that all three parts of us are in balance. When we use words that express our feelings like "wow", "want", "I'm scared", "aw, shucks", "great", "I don't want to", we know our keiki is at work.

'O AU KE KEIKI (ME, THE CHILD)

The concepts of self can also be used to help students understand behavior. When students learn to understand themselves and others, they will be better equipped to function in the classroom, on the playground, as well as in the home.

The Hawaiian children were nurtured with much love and aloha. This led to positive concepts of the self. These feelings of self worth and attitudes of acceptance were reinforced in their daily lives by the practice of 'ohana concepts of aloha (love), kōkua (help), laulima (cooperation), kuleana (resposibility), and lōkahi (harmony, unity). 'Ike (recognition) was given to each other freely and openly. Within the close 'ohana (family), they received 'ike not only from parents but also from grandparents, aunts, uncles, and cousins.

These concepts of 'ohana are also applicable in classrooms today. Many teachers may already be using these concepts with their students.

The following pages present the Hawaiian concepts of aloha, kōkua, laulima, kuleana, lōkahi, and 'ike which can be taught to the children.

The children should be continually encouraged to demonstrate these 'ohana concepts in their relationships with each other.

(Note: The masters of the drawings which follow are in 17" x 22" posters in the Hawaiian Studies Program Instructional Visuals Packet: Nā Ki'i Ho'ona'auao, Series I. They are also part of a packet of 8½" x 11" masters for duplication and transparencies.)

'Ike is to recognize everyone as people. Everyone needs to be recognized, especially children. 'Ike can be given in a number of ways in school. It can be a look, a word, a touch, a hug, a gesture, a kiss and even a scolding. Children need to give 'ike to each other, so if the teacher models the giving of 'ike then the children will internalize the behavior. Just to tell the children how nice they look, or how happy you are that they are quiet, or "How pretty the ribbon in your hair looks" or "What a handsome shirt you have on today!" are all ways of giving 'ike. It helps create a positive atmosphere in the classroom and makes everyone feel maika'i (good).

EVERYBODY NEEDS "'IKE" (RECOGNITION)

Kamaiki (Baby)

Nā Mākua
(Mom and Dad)

Keiki Kāne (Son)

Nā Kūpuna
(Grandparents)

Aloha has many meanings: love, affection, compassion, mercy, pity, kindness, charity, hello, goodbye, greetings, farewell, alas, regards. It can be shown in a variety of ways. The 'ohana provided a ready source of love, affection, kindness, courtesy and hospitality. Aloha was shown and given not only to 'ohana members but to all who visited.

ALOHA

In every 'ohana in old Hawai'i, every member helped to get the work done. Kōkua (help) was an important part of every household and family members usually did not have to be asked to kōkua; they helped whenever they saw work being done.

KŌKUA

One of the most important kuleana (responsibility) of every ʻohana member was to maintain acceptable standards of behavior. Attention seeking behavior was frowned upon and respect for social rank and seniority was a must. Each person was taught what was acceptable and not acceptable. He or she learned to accept and carry through his or her kuleana willingly.

KULEANA

Everyone in the 'ohana shared the work load whether it be planting, building a house or a fishpond, preparing meals, or fishing. Each person did a share of the work to get it done. If a man wanted a house built, his 'ohana willingly came to help. The men gathered the building materials, built the foundation, put up the frame and attached the thatch. The women wove the floor mats of lau hala and made kapa out of wauke (paper mulberry). They also gathered the pili grass and other thatching materials. The children helped in whatever capacity they could depending on their age and sex. This kind of laulima made the work easier and more enjoyable.

LAULIMA

The 'ohana considered lōkahi (harmony, unity) very important, lōkahi not only with people but also with the universe. The members of the 'ohana showed this in their daily living by sharing goods and services with each other. The 'ohana members generously gave to others no matter how little they themselves had. Strangers were greeted with aloha and were invited to come in and partake of food. Anyone visiting another area took food or a gift of some kind as a symbol of hospitality. They established lōkahi with the universe by observing the kapu of daily living, which included homage to the gods. These kinds of behaviors nurtured harmony or lōkahi in the 'ohana.

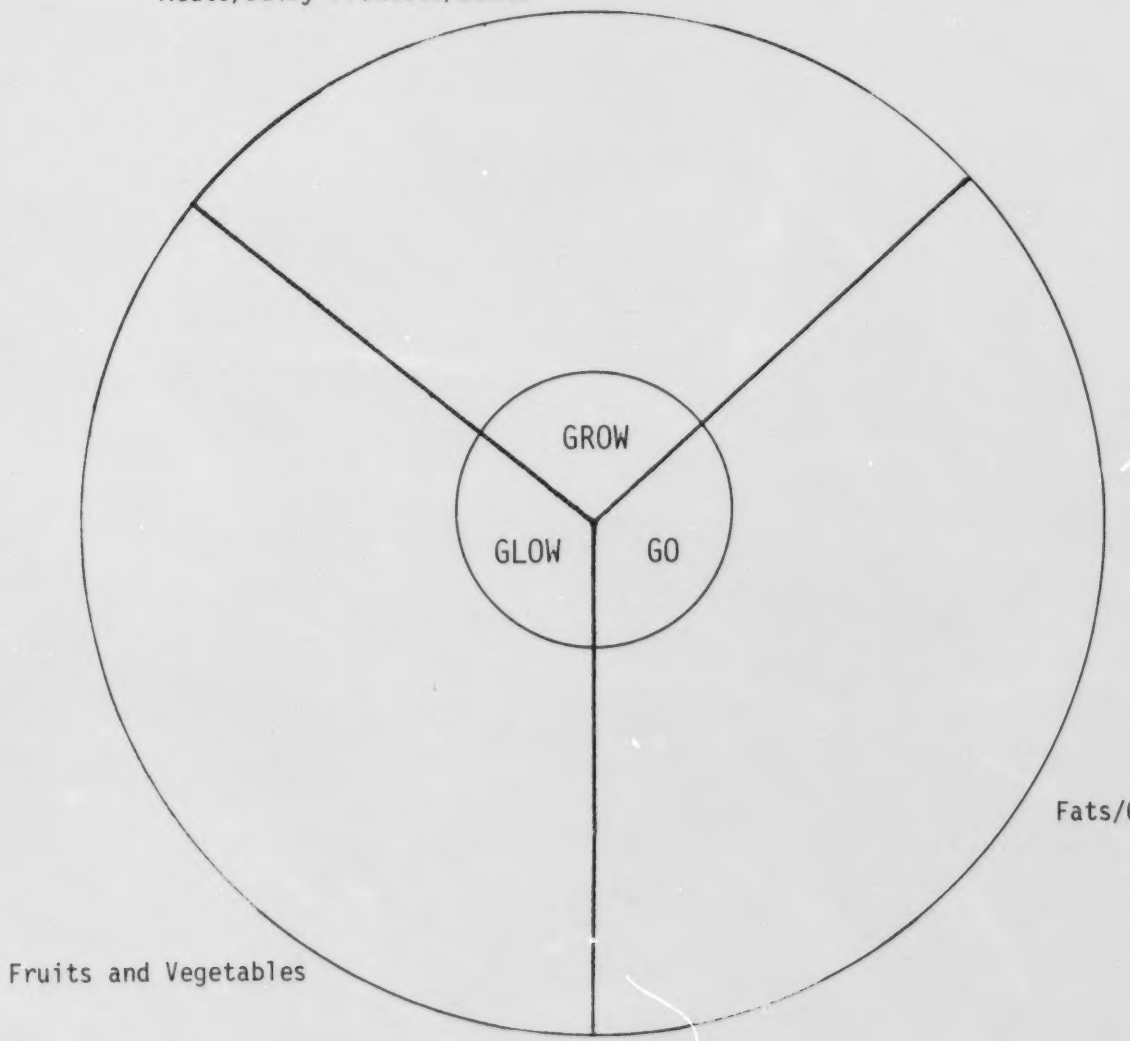
LŌKAHI

Teachers have a tremendous influence on the children with whom they relate and so are very instrumental in changing behavior. Many children today are growing up with both parents working and therefore need to have some family-oriented activities in school with which they can identify.

Teachers can establish a family-type atmosphere in the classrooms by creating a positive, supportive atmosphere. In early Hawai'i, the people lived in large 'ohana with parents, aunts, uncles and cousins, grandparents and great grandparents living in close proximity. When a child was reprimanded by his/her parents, he/she had many other sources of aloha and support to make him/her feel better. Today, we as teachers, can provide support systems for our students by teaching them to give 'ike (recognition) to each other more freely. This behavior is learned, so the model we bring to the classroom is of great importance.

I hope that this narrative on 'ohana has helped you become more aware of the Hawaiian 'ohana concepts. By using and modeling these concepts in your classroom, the students will be better equipped to build positive self concepts and attitudes of acceptance in the classroom.

MY DAILY BREAKFAST FOODS



Monday _____

Tuesday _____

Wednesday _____

Thursday _____

Friday _____

CONTENT AREAS	EMPHASES
SOCIAL STUDIES	People's lives are influenced by their physical location on the earth and the availability of natural resources. Map reading: Identifying nā mokupuni (islands), nā moana (oceans), nā 'āina (land areas) Locating famous and important landmarks Locating world communities on a globe Natural resources vs. human-made resources Awareness of natural resources using sensory perceptions Effect of people and technology on the environment Importance of wai (fresh water) as a natural resource Today's water problems Influence of climate, land and natural resources on Food, clothing, shelter Industry and other community enterprises Learning about the historical past so as to understand Changes The future
ENVIRONMENTAL EDUCATION/ SCIENCE	The environment influences people's ways of living and people in turn influence the environment. Sensory activities to develop environmental awareness Awareness and appreciation of plants Parts of a plant Germination of a seed Natural resources vs. human-made materials Renewability of resources Careers involving natural resources Experimenting with natural dyes Hawaiian cooking methods using natural resources Hawaii's water supply Water cycle Conservation Prevention of pollution Importance of water to Hawaii's kalo production Environmental ethics Responsibility (Careers) Future environments

LEARNER OBJECTIVES

- Identifies the island on which a student lives, locates it on a map, and names important mountain(s) on that island.
- Identifies some of the historical or legendary landmarks within the student's community or neighboring area.
- Names occupations in the community that are directly dependent on various natural resources--lei maker, tree trimmer, taro farmer, fisher, forest ranger, wild life manager, resort staff, tourist industry personnel, water management personnel, etc.
- Detects factors in the local environment of the home, school, or community which affect health and safety.
- Discusses the importance of pure water to the community.
- Identifies historical figures and events and tells why they are important in Hawaiian history.

APPENDICES

Unit II-A Maps of the Islands, pp. 129-136

-B Worksheet: Original Source, p. 137

-C News articles: Water Problems, p. 138

-D Food Chain, p. 148

-E Pictures of King Kamehameha and Prince Kūhiō, p. 149

-E1 Important Cultural and Historical Contributors to our Island Communities (Sample), p. 151

- Describes some of the natural phenomena in Hawai'i and identifies them with their proper Hawaiian names.
- Is aware of the opportunities for scientific investigation which exist in the student's community--nature trails, tidal pools, scientific and natural history institutions.
- Is able to distinguish between natural and human-made resources in the Hawaiian environment.
- Cites examples of environmental problems in the community and the State.
- Lists a number of environmental factors which may affect the physical or emotional health of human beings in Hawai'i.
- Discusses the importance of pure water to the community.

Unit II-F Water Cycle, p. 153

CONTENT AREAS	EMPHASES
ENVIRONMENTAL EDUCATION/ SCIENCE (CONTINUED)	
LANGUAGE ARTS	Skill building activities based on social and science/environmental education concepts studied in this unit. Creating imagery Descriptive words for the physical features of the mokupuni (islands) Vocabulary building in English and Hawaiian Poetry about aloha 'āina, the love of one's home area Creating poems Improving writing skills Planning and creating a tourist brochure Letter writing Writing for specific purposes Journal writing Creating and memorizing 'ōlelo no'eau (wise sayings) Writing haiku Planning a class mural on the ahupua'a (land division) in which the school is located Discussion skills Planning skills Reporting skills

LEARNER OBJECTIVES

- Is aware of the importance of fresh water to sustain human life and to permit agriculture in former times and today.
- Explains the need for cool, fresh flowing water in taro cultivation.
- Describes an area where taro is still under cultivation.
- Identifies which ancient cooking methods are still in use.
- Discusses some of the differences in cooking methods available to the Hawaiians of former times and to people in modern Hawai'i.
- Is aware that each person has something to give to and receive from society and the environment.
- Is aware that each person has some responsibility for the care of the 'aina (land), the wai (fresh water) and the kai (ocean) and the resources of each.

- Describes some of the natural phenomena in Hawai'i and identifies them with their proper Hawaiian names.
- Expresses the student's feelings about Hawai'i in English prose or poetry.
- Imitates with correct pronunciation the Hawaiian words, expressions and phrases modeled by the teacher or kupuna.
- Identifies objects or people in pictures with simple Hawaiian phrases or single word responses.
- Responds in Hawaiian to simple oral instructions and requests given in Hawaiian.
- Answers questions with simple Hawaiian phrases or single word responses.
- Initiates simple conversational exchanges using Hawaiian expressions.
- Reads with correct pronunciation the Hawaiian words and expressions which have previously been learned orally.

APPENDICES

Unit II-O Ahupua'a, p. 167

-P Uses of the Breadfruit, p. 171

-Q Picture of a Pā'ū, p. 172

-R Mo'okū'auhau o Kalākaua, p. 174

-S Genealogy Chart, p. 175

-W Language Patterns, p. 179

CONTENT AREAS	EMPHASES
LANGUAGE ARTS (CONTINUED)	Listening to and discussing Hawaiian literature Reading and appreciating Hawaiian poetry Stories of origin Writing stories with environmental themes Planning a picture storybook Biographies of well-known/important people Discussing the concept of biography Listening to a biography (Ka'iulani) Understanding the concept of genealogy Interviewing 'ohana members and collecting information (research) needed in biographical writing Listening to and discussing the biography of another famous person (Kamehameha I) Creative writing Speaking Narratives of Hawai'i 50 years in the future
MUSIC	Many songs and chants of Hawai'i contain expressions of the Hawaiians' love and appreciation for their environment. Songs of the islands "Ka'uiki" "Nā Moku 'Ehā" "Nani Ke Ao Nei" "Lei 'Awapuhi" "Wai O Ke Aniani" "Koni Au" "Huki I Ke Kalo" "Nā Kumu Ola O Hawai'i" "Hawaiian Rough Riders" "Paniolo Country" Songs written for and by famous people in Hawai'i's history "'Ainahau" (Princess Ka'iulani's home) "Aloha 'Oe" (Written by Princess Lili'uokalani) "Hawai'i Pono'ī" (Written by King Kalākaua) "Makalapua" (About Queen Lili'uokalani) "E Manono" (Manono, wife of high chief Kekuaokalani) Creating hula motions as a means of expressing awareness of natural phenomena Learning the natural sources of Hawaiian instruments

LEARNER OBJECTIVES

- Listens to and answers questions orally about a legend or story about Hawai'i told in English but containing Hawaiian content words appropriate to the child's level of language development in Hawaiian.

- Imitates phrases in a Hawaiian chant.
- Sings selected Hawaiian songs introduced by the teacher while playing rhythm instruments in time with the beat.
- Accompanies a Hawaiian chant using a rhythm instrument such as an ipu, kāla'au, kā'eke'eke, or pū'ili.
- Performs a simple chest-slapping hula or other hula noho (seated hula).
- Illustrates the tonal-rhythmic patterns of a Hawaiian chant through singing and performing interpretive dance patterns and body movements.
- Composes and performs simple rhythmic patterns using Hawaiian instruments.
- Coordinates motions and movements of hands and feet while performing a traditional hula kahiko or hula 'auana.
- Names the stages in the production of poi from the planting of the taro until the mixing of the store-bought poi with water as it applies to the kalo chant, "Huki I Ke Kalo."

APPENDICES

Unit II-G Hula Instruments, p. 154

-H Chant: "Huki I Ke Kalo," p. 155

-M Song: "Ka'uiki," p. 165

-T Chant: "Nā Kumu Ola O Hawai'i," p. 176

CONTENT AREAS	EMPHASES
ART	Children express their feelings about the environment through a variety of experiences in creative activities using different media. Patterns in nature Leaf prints Leaf crayon rub Collage Favorite places and landmarks Painting posters Creating travel posters Environmental appreciation through various media Illustrated multi-panel activity display--favorite activities in the environment Mural--the ahupua'a Painting--improving the environment Diorama--environmentally-based occupations Illustrations of 'ōlelo no'eau (wise sayings) through collage techniques Montage--water conservation (photography) Logo--conservation of natural resources Drawing--steps in poi production Painting group movie roll--"Processing Poi in Hawai'i Today" Mobile--sealife Illustrations/Book Covers--students' storybooks on environmental themes Painting--Princess Ka'iulani's home Montage--Princess Ka'iulani's life Displays--souvenirs/mementos Ceramics--figurines of well-known community people Mural--"Hawai'i: 50 Years in the Future"
GAMES AND RECREATION	Children participate in physical activities that help them develop their physical skills as well as their awareness of the environment as they engage in outdoor as well as indoor games and activities. Game - "Racing Around the Islands" Game - "Matching Symbols" Hawaiian games Coordination Strength Endurance Skill

LEARNER OBJECTIVES

- Expresses one's awareness of the Hawaiian environment by engaging in creative activities that allow the free use of a variety of media in a variety of artistic projects.
- Works with partners and groups on Hawai'i-oriented art projects.

APPENDICES

Unit II-H Kalo: Steps in Making Poi, p. 155

- Identifies recreational opportunities in both human-made and natural environments in Hawai'i.
- Plays Hawaiian language oriented games with partners or groups.
- Follows rules in simple Hawaiian games and activities.
- Performs basic body movement patterns in games and dances.

Unit II-L Game: "Let's Go Swimming!" gameboard, p. 159

-L1 Game: "Let's Go Swimming!" word cards, pp. 160-161

-L2 Game: "Concentration" word cards, p. 162

-U Game: "Know the Alaka'i (Leaders)," p. 177

-V Summary of the legend, "The Flying War Club," p. 178

CONTENT AREAS	EMPHASES
GAMES AND RECREATION (CONTINUED)	Other ethnic games and physical culture arts Aerobic dancing Children participate in quieter, indoor games to build their nature-related Hawaiia. vocabulary, improve their memory and build greater awareness of various aspects of their environment. Game - "Let's Go Swimming!" Game - "Concentration" Game - "Memory Circle" Creative Personifications Children participate in a game which reinforces the study of well-known people, living and dead, from their community, Hawai'i, the United States and the world. Game - "Know the Alaka'i (Leaders)"
HEALTH	The environment provides some natural remedies for physical ills that affect the health and safety of the people. Human technology has improved the availability and quality of medicines today. Medicinal practices today Community helpers involved in caring for people Modern technology and equipment Medicinal practices in early Hawai'i
NUTRITION	People in a community make food choices based on what is available in their environment. Classifying food Mea'ai Hawai'i kahiko (early Hawaiian food) Staple foods Today: Rice, potato, poi/kalo Early Hawai'i: Kalo, 'uala (sweet potato), 'ulu (breadfruit), mai'a (banana) Seafoods

LEARNER OBJECTIVES	APPENDICES
• Participates competitively in simple Hawaiian games and sports. • Relates the use of Hawaiian games, sports, and quieter pastimes in former times to improving coordination and agility.	
• Detects factors in the local environment of the home, school, or community which affect health and safety. • Is aware that Hawaiians had experts who specialized in using herbs and other methods to improve and restore health and that these people were called kāhuna.	Unit II-I Parts of the Kalo Plant, p. 156
• Distinguishes which foods served at a typical lū'au or pā'ina (feast, dinner) are Hawaiian foods and which are introduced foods. • Identifies previously unfamiliar Hawaiian foods. • Identifies some of the plants brought to Hawai'i by the Polynesians. • Discusses how food choices of the Hawaiians were limited by what was grown or caught by them. • Names some of the fish species that the Hawaiians in former times and many people today still eat. • Cites reasons for food choices for self and others.	Unit II-J Some Natural Resources of O'ahu, p. 157 -K Summary of the legend, "The Empty Sea," p. 158 -N Worksheet: "We Predict," p. 166

SOCIAL STUDIES

- The children will be involved in activities that will help them understand that people's lives are influenced by their physical location on the earth and the availability of natural resources.

A. Location

1. Display a physical map of nā mokupuni o Hawai'i nei (the islands of Hawai'i). Check with the school librarian if such a map is not readily available to you.

2. Allow the children to look at the map, study it and do some inquiry before beginning the following discussion.

3. Ask:

   a. What does this map show?

   b. Who can come up and place this pointer on the mokupuni on which we live? 'O wai ka inoa o ko kākou mokupuni? (What is the name of our mokupuni?)

   c. What does the blue on the map represent? moana (ocean)

185

SCIENCE/ENVIRONMENTAL EDUCATION

- The following activities allow the students to use their senses to increase their appreciation and understanding of the environment.

A. Sensory perception

1. Plan a walk to a specific area on the school grounds that has trees, plants and a variety of other flora for the children to see. This activity can also be done in a park or a forested area.

   a. Blindfold two students and have them walk with you to some trees. Have them feel the bark of a variety of trees. Have them share what they feel. Ask:

      1) How does this bark feel?

      2) Does it feel the same as the one before?

      3) Is it the same kind of tree as the one before?

      4) Can you name the tree?

   b. Have some students (blindfolded) feel the textures of leaves, nuts or needles of trees that grow in the area

LANGUAGE ARTS

- The following activities involve the the children in skill building experiences dealing with the topics studied in social studies and science/ environmental education.

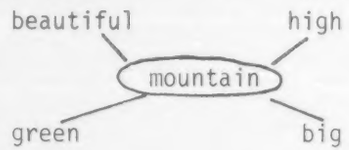
A. Skills in creating imagery

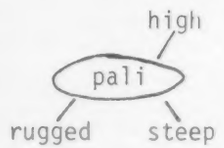
1. Ask:

   a. What are some of the physical features of our mokupuni? (mountains, waterfalls, pali, forests, sunsets, ocean)

2. Write the children's responses randomly on a large wall chart and circle each response.

3. Have the children think of descriptive words for each of the features listed





186

MUSIC

- The following songs, chants and activities in music involve the children in creative expressions of their awareness of their environment.

  A. Songs of the islands

  Source: Māhoe. E Hīmeni Hawai'i Kākou. Available in most school libraries. See also Kamehameha Schools, Explorations, any year.

  1. When the children have learned the names of the eight main islands in social studies, play the island songs for each of the islands and have them listen to the songs after you explain the meaning of the words.

  2. Teach them the song of their own island. Talk about the meaning of the words and show them pictures (scenic) of different places on the island whose beauty is reflected in the song. Encourage the children to ask their parents and grandparents for songs of the island that would be good to share with the class.

  3. Play each island song and have the children identify the island to which it belongs.

ART

- The following activities allow the children to creatively express their feelings about their environment through a variety of media.

  A. Patterns in nature

  There are a variety of art activities that can be done by the children in the classroom that go along with the study of their environment.

  1. Leaf prints

  (See Environmental Education column, activity A.1., p. 78) After experiencing a sensory activity, encourage the children to collect a variety of leaves. Remind them about taking care of the environment as they gather the leaves.

  Materials needed:
  paper, 8½" x 11"
  straight pins
  variety of leaves
  metal wire screen (or nylon or plastic), 9" x 12"
  tempera paint
  toothbrush

  a. Place a leaf on a sheet of paper and secure it to the backboard.

  b. Place the screen over the leaf.

GAMES AND RECREATION

- The following activities are fun games for the children to help them become more aware of our island environment.

  A. Game - "Racing Around the Islands"

  1. All the students join hands to form one large circle.

  2. Count off in Hawaiian by 'ekahi, 'elua, 'ekolu, 'ehā.

  3. In one game, use the names of the four major islands and in another game, use the names of the four smaller islands.

  4. One person remains the haku (master) who stands in the center of the circle. The haku calls the name of one island. All of the children who represent that island have to run around the outside of the circle.

  B. Game - "Matching Symbols"

  Preparation:
  Teacher should prepare at least eight sets of tags. In each set, one tag should show an island name (Ni'ihau), a lei (pūpū) and a color (ke'oke'o/white) appropriate for the particular island. With more than 24 students in class, you will need some duplicate sets. Color and lei name information can be found on the island maps in Nā Ki'i Ho'ona'auao.

SOCIAL STUDIES

d. What do you suppose the green areas represent? the brown? 'āina (land) Point to the legend of the map and explain why some areas are brown and others green.

e. Are there any kuahiwi or mauna (mountains) on our mokupuni? 'O wai nā inoa o nā kuahiwi ma ko kākou mokupuni? (What are the names of the mountains on our mokupuni?

f. Where are the mountains on the map? What color represents the mountains? See Appendix Unit II-A, pp. 129-136 for a map of your island. Use the appropriate island poster from Nā Ki'i Ho'ona'auao, Series I. Duplicate the 8½" x 11" individual maps for all of the children to work with.

g. How are the mountains shown on this map? Place your finger on the mountain(s) and say the name(s) after me.

4. Have the children locate their town on the map. If the name of the town is not printed on the map, have them write it on their map.

SCIENCE/ENVIRONMENTAL EDUCATION

you select. Have them share what they feel and learn about each item they touch.

c. Do the same exercise without blindfolds using the same trees, leaves and nuts or fruits. See if the children are able to identify the items they touched when they were blindfolded.

2. Take the children to an environment where there are several varieties of living things. Have them sit together in a group with their eyes closed.

a. Have them listen for sounds and tune in to the smells.

b. Select one student whose eyes are open and instruct him/her to describe a living thing or part of a living thing using one or all of his/her senses. When he/she is finished, have the students open their eyes and identify the living thing described.

c. Have the children pick up a handful of soil. Have them sift through it and tell what they find in it, such as rocks, sand, shells, leaves, insects, etc. (blindfolded)

LANGUAGE ARTS

Translate these words to Hawaiian using the school kupuna, The Basic Vocabulary Lists on pp. 181-187 or the Pūku'i/Elbert Hawaiian Dictionary.

Use the simple language patterns in Appendix Unit II-W, p. 179 to make Hawaiian sentences.

4. Have the children look for pictures of natural phenomena in magazines, tourist brochures and pamphlets. Have them cut out these pictures and arrange them on a bulletin board. Ask for a committee of volunteers to look up the Hawaiian equivalents for the natural phenomena using the Basic Vocabulary Lists on pp. 181-187 of this guide.

5. Look for a variety of poems that express the authors' love for a place or home site. These are available in a variety of poetry books, song books and publications by the Office of Instructional Services, e.g., Haku Mele O Hawai'i, various volumes (see your school librarian for various volumes).

MUSIC

4. Teach the children as many of the island songs as they are capable of learning.

B. Song: "Ka'uiki"
Sources: DOE/OIS. Strings and Things. 1966, ETV Guide.
Dances of Hawai'i, Ancient and Modern. Bowmar Records of Los Angeles.
Māhoe. E Himenī Hawai'i Kākou, p. 81.
See Appendix Unit II-M, p. 165.

1. On a map, point out Hāna, Maui to the children. Read the description of this place name from Puku'i/Elbert/Mo'okini. Place Names of Hawai'i, p. 92.

2. Introduce the children to Māui the demi-god by reading a few legends to them from Thompson. Māui - Full-of-Tricks.

3. Introduce them to Ka'ahumanu by telling them about her position as Kamehameha the Great's favorite wife who was a very powerful influence in Hawai'i. Show them a picture of her. See Feher, Hawai'i: A Pictorial History, p. 151.

4. Relate to them that Ka'uiki Hill was an important fortress for the chiefs of Maui to guard

ART

c. Select a color. Using the toothbrush, paint across the screen. Encourage the children to be very careful at this stage. The amount of paint on the toothbrush must not be excessive or it will drip onto the design rather than being splattered.

d. Talk about the different sizes and shapes of leaves.

e. When the prints are dry, have the children group together those prints with the similar shapes. Have them group the leaves by sizes. Have them label the leaves when the names are known.

f. Have the children take the leaf prints outside to identify leaves found outside during nature walks.

g. These prints may be left out for everyone to enjoy and later placed in a booklet. This can be a valuable student-made reference book for others to use in identifying leaves. Encourage the children to learn the Hawaiian names along with the English names, if known.
E.g., lau kukui (candlenut leaf)
lau kuawa (guava leaf)
lau manakō (mango leaf)

GAMES AND RECREATION

Directions:

1. Students are assigned to one of two large groups.

2. One group stands on one side of the field and each student is given a tag with an island name on it to hold in his/her hand.

3. The students in the other group are each given a tag with a corresponding lei name or color name in Hawaiian for each child to hold in his/her hand.

4. At a given signal, all the children must run together and find matching partners and sit down together. The object is to avoid being the last matching trio to sit.

5. Cards and names are rotated after each round of play.

C. Hawaiian games

The Hawaiian people lived in harmony with nature. Their daily lives depended on products from the land and sea. Games and sports were a source of relaxation and pleasure. The Makahiki was a four-month period, beginning in mid-October, and dedicated to Lonoikamakahiki, God of Sports. Most work stopped during this time and the people participated in games and the hula.

SOCIAL STUDIES

5. Go to some tourist area or agency on your island to obtain some tourist brochures. Divide the children into mini 'ohana and have them alu like (work together) to find some famous and important landmarks to add to their maps. Encourage them to listen to one another and to share their findings.

6. Compile all of their research on one map and transfer this information to the wall chart if it is laminated. If not, place a sheet of transparent plastic over the map before recording the information.

7. Have the children work in their mini 'ohana and cut out pictures from the brochures that describe special places on the mokupuni. Place these pictures on the bulletin board around the map of your mokupuni. Have them locate the places on the map. Use lengths of yarn to connect the pictures to the location on the map. This can be a learning center for the children. During their free time they can practice their location skills.

193

SCIENCE/ENVIRONMENTAL EDUCATION

3. Give the children drawing paper and crayons. Have them draw as many shapes and designs they see in their environment. Identify these shapes in math class giving them their geometric names such as, triangular, circular, oval, square, etc.

4. Have them collect things in the environment to take back to the classroom such as leaves, nuts, pieces of bark, stones, flowers, shells, etc.

5. Take the children to a location where they can listen to a wide variety of sounds. Have them distinguish between natural sounds and human-made sounds. Allow a student to imitate a sound and have the class guess what that sound is.

6. Smell: Have the children bring to school a variety of flowers found in the environment. Have them identify each flower by name. Introduce the Hawaiian word for flower--pua. Set up a display of these pua with the proper labels. Label the display Nā Pua o Hawai'i (The Flowers of Hawai'i). Have the children come up to smell the flowers and observe the color and texture. When they can identify

LANGUAGE ARTS

a. Read the poems to the children and motivate the children to visualize the scenes created in the poems.

b. Talk about "imagery" and the use of descriptive words to create images. Introduce new adjectives that can be used to describe the natural phenomena listed on the wall chart in lesson A.1. Have the children listen for these adjectives in the poems you share.

6. Have the children look through some poetry books for poems they especially liked that describe places or homes.

7. Have them share their poems by reading them to the class and tell why they especially liked the poem.

8. Creating poems

a. Having discussed the poems and the imagery created by the use of descriptive words, motivate the children to become poets by writing their own poetry about their homes and/or favorite places.

194

MUSIC

against attacks by chiefs sailing over from Hawai'i. It is also the site where the infant Ka'ahumanu lived while war was raging further inland.

5. Write the words of the song on a chart, one verse at a time. Write the translation also.

6. Identify the words that are familiar to the children by asking:

   a. Do you see any familiar Hawaiian words in the verse? What are they? Call on students to underline these words.

   b. What does this first verse tell you about Ka'uiki? Show them a picture of Ka'uiki Hill if one is available.

7. Play or sing the song for the children after going over the words. Encourage the children to sing with feeling in their voices so that they sound like they appreciate Ka'uiki.

8. Encourage them to create hula motions expressing their feelings for Ka'uiki.

ART

2. Leaf crayon rub

   Materials needed:
   newsprint, 8½" x 11"
   crayons

   a. Encourage the children to look for leaves that have distinctive characteristics like:
      prominent veins
      sawtooth edges
      odd shapes

   b. Talk about the leaves the children bring to class and have them try to identify them.

   c. Follow this procedure for printing:

      1) Place a leaf on the table and put a sheet of newsprint on top of it.

      2) Using the side of a crayon, rub it across the leaf firmly. A dark crayon will produce a better print.

      3) Experiment with several leaves.

   d. Set up a display of these prints and encourage the children to become researchers by identifying each leaf with its correct names: English,

GAMES AND RECREATION

1. Develop an English vocabulary list with some of the following terms as starters:

   a. Coordination
   b. Strength
   c. Endurance
   d. Skill

2. Discuss with the children reasons why they engage in games. Make a list of reasons why we are such "game-oriented" people today. Ask:

   a. Do all people around the world enjoy games as we do? What makes you think so.

   b. Do they play games for the same reasons we do?

   c. What kinds of games do you suppose the Hawaiians played? (Have them make predictions.)

3. Using Dr. Donald Mitchell's Hawaiian Games for Today, expose the children to the pictures and introduce them to a few of the 60 Hawaiian games listed in the book.

   Some of the suggested games to use with second graders are listed below.

   a. Games of strength and endurance
      Hākōkō noho - sit down wrestling, p. 18
      Uma - hand wrestling, p. 19
      Hukihuki - tug of war, p. 25

SOCIAL STUDIES

8. Ask the school kupuna to share some legends or stories that he/she remembers about landmarks in the community or outside the community. If there is an historical event that happened in the area, the event should be shared. Have the children express why they feel the event is important.

9. Plan a field trip to visit some of these sites. While on the trip, have the children point out scenic spots that they feel people would like to visit. Using the tourist brochures as a resource, have the children plan a brochure all their own that they can send to another second grade class in another state or country. This can be the beginning of a good comparative study of life in a community in another location. Pen pal type letters can be instituted and cultural sharing would be the result. See language arts lesson B.2. on p. 88.

10. Obtain several globes in order to give the children a chance to work in small 'ohana to locate Hawai'i. Encourage them to kōkua (help) and alu like (work together). When one 'ohana has located Hawai'i, have them give the other 'ohana hints as to the location.

    E.g.: It's in the Pacific Ocean.
    It's close to California.
    etc.

SCIENCE/ENVIRONMENTAL EDUCATION

the flowers by sight and smell, blindfold a few of them and have them identify the flowers by smell only.

Review

Set up some activities in the classroom in which the children can experience a real appreciation of their five senses.

E.g.:

1. Turn the lights off and darken the room completely. Open a bottle of kim chee and/or other odorous foods and have the children guess what they are smelling.

2. Produce a sound and have them identify the natural source of the sound.

3. Place a section of a fruit or vegetable on their desk in a container through which they cannot see. In a darkened room, have them open the container and identify the food by touch and then by taste.

Many more similar activities can be created to develop the children's sensory perceptions. Encourage the children to use their senses to develop more awareness of what's in their environment.

LANGUAGE ARTS

b. Have them select a favorite place that they enjoy or love and think of all the reasons why they love the place.

c. Have them write their poems. Those who are motivated may write more. Encourage them to share their poems with a friend.

d. Have the children plan a pamphlet format for their poems. Give them a sheet of construction paper 12" x 18". Have them fold it in half to make a pamphlet. Encourage them to create an illustration of their poems on the inside cover and to write their poems on the opposite side.

e. Allow the children to create their own cover decoration with an appropriate title.

f. Have the children share their pamphlets and poems with another class by having a "poem-sharing" session.

MUSIC

9. As each verse is learned, continue to the next verse until the whole song is learned. The children will enjoy creating hula motions for the verses, using the English translation as a guide. Call on the Hawaiian Studies and Music Resource Teachers and the school kūpuna for kōkua when needed.

C. Song: "Nā Moku 'Ehā"
Source: Māhoe. E Himeni Hawai'i Kākou, pp. 60-61. (Tapes are available.) This song describes the four main islands of Hawai'i--Hawai'i, Maui, O'ahu and Kaua'i. The song tells of the beautiful island lei and the main kuahiwi (mountain) on each island.

1. Talk about your own island first and locate the main kuahiwi (mountain) on a map. See Nā Ki'i Ho'ona'auao and the Hawaiian Islands lei poster designed for Alexander and Baldwin. Have the children identify the lei of each island.

2. Talk about the description in each verse and have the children create hula motions expressing the translation of the words.

ART

scientific, and Hawaiian, if possible. Classify the prints by shape, size, color or usage of the tree or leaves.

3. Collage

(See science/environmental education lesson A.4. on p. 82.

a. Using the materials gathered on the field trip, have the students compose collages depicting their feeling about the environment. Encourage them to work in pairs if they so desire.

b. Talk to the children about textures and color combinations. Have them arrange their materials on the sheets and when they are completely satisfied, then glue them onto the paper.

c. When they are done, have them share their feelings about their art work.

B. Favorite places and landmarks

1. Painting posters

"My Special Place"

Materials needed:
butcher/wrapping/Kraft paper, 18" x 36"
paint and brushes

GAMES AND RECREATION

b. Games of skill
'Ulu maika - bowling using a rounded stone, pp. 28-29.
Moa pahe'e - bowling with a torpedo-shaped dart, pp 34-35.

c. Quiet games
Hū - spinning tops using kukui nuts, p. 64
Kōnane - game of checkers using white coral and black lava stones, p. 62
Kimo - jacks, p. 60
Hei - string games, p. 65

The directions for these games are clearly written with colored pictures of students playing the games. The children need to be exposed to these Hawaiian games so they can experience the strength, endurance, skill and coordination building involved in early Hawaiian games.

4. Using the reference listed, share the information on p. 6 that describes the competitions held in early Hawai'i.

5. Initiate discussion and inquiry.

a. Why was it necessary to develop rules for each game?

b. If we had the opportunity, how might we change one of the games or the rules?

SOCIAL STUDIES

11. Continue this activity as a fun exercise as well as a motivation for the children to become more interested in places around the world. They can look for the United States; Japan, where so many of our cars and TVs come from; the Middle East, one of the sources if our oil; and, other places of importance.

Culmination

Simulate a situation in which the children can pretend they are expecting relatives or friends from another island or from the mainland who have never been here before. Their job is to "sell" their island to these relatives or friends as a wonderful place to visit. They will plan a presentation that could be given to a tour group. Have them use the brochure they created in language arts lesson B.1., p. 86 and art lesson B.2. on pp. 89-91. Present this to another second grade class.

B. Natural vs human-made resources

Preparation:

Have available a shopping bag filled with a variety of objects from the environment that can be categorized as having come from a plant, an animal, the sea or the land.

SCIENCE/ENVIRONMENTAL EDUCATION

B. Awareness of plants as an important part of our environment.

1. Plan a field trip to Foster Gardens or other botanical gardens on your island. Ask for an awareness walk through the garden. Ask for sensitivity experiences to stimulate the children's senses.

2. After visiting a botanical garden, plan one of your own on campus. Talk with the custodian and get the children involved in beautifying the campus. Involve them in planting flowers, shrubs, ferns, trees, and vegetables. They can help weed and keep the campus unlittered by involving them in this kind of campus beautification program.

3. Talk to the science resource teacher in your district about setting up a terrarium. The children will be able to witness a self-sustaining environment for plants.

4. Study plant life even further by germinating mung bean seeds using wet paper towels.

   a. Place some mung bean seeds in a paper towel that has been folded and dampened.

LANGUAGE ARTS

B. Improving writing skills

1. Planning and creating a tourist brochure

   a. Study the tourist brochures used in social studies. Have the children decide the kinds of things they would like to present about their own part of Hawai'i. Make a list of these.

   b. Have them decide what they would like to include in the brochure such as maps, sites to visit, places to eat and places to live while visiting their island or community.

   c. Have them create all of their illustrations, plan how to put the brochure together, and how to organize the class so that everyone participates actively in the production.

   d. Complete the creation of the tourist brochure so it can be used in the next activity (letter writing).

MUSIC

3. Teach each verse to the children and add instrumentation if desired, e.g. pū'ili or kāla'au beats.

D. Creating hula motions for natural phenomena

1. As the children become more aware of the natural phenomena in their environment, take some time to nurture their creativity and sensitivity by creating hula motions that represent the natural phenomena.

2. If a kupuna is available, this would be an excellent lesson for him/her to present. Some of the phenomena may be:

mahina - moon
lā - sun
ua - rain
noe - mist
wailele - waterfall
honua - earth
kuahiwi - mountain
kumu lā'au - tree

E. The Hawaiians depended upon the natural resources in their environment for the materials they needed to produce musical instruments. Help the children become aware of this by exposing them to the Hawaiian instruments.

203

ART

(This activity goes along with language arts activity A.8., p. 82)

a. After studying special places around the island, have the children think about one special place they have been to that has a special meaning for them. Ask them:

1) Where do you like to go when you want to be by yourself?

2) Where do you like to be when you're sad? Think of a place where you enjoy being because it makes you happy and content with the world.

b. Encourage the children to paint this favorite place and to paint themselves in the picture.

c. When they are done, have them share their creations and tell why they enjoy their favorite place.

d. Encourage them to write a simple poem about their favorite place and to attach it to the right-hand corner of their paper. Mount the posters in a show area.

GAMES AND RECREATION

c. Do you agree that the games we learned improved the skills we said they would? Explain.

6. Activities

a. Provide many opportunities to become familiar with the selected games.

b. Plan a time when children compete against each other.

7. Hawaiian games used by the warriors and ali'i of Hawai'i to ready themselves for warfare

Materials needed:
moa - tapered dart
ihe - wooden spear
(Both of the above are available through most district offices. Contact the Hawaiian Studies Educational Specialist or Resource Teacher.)
wooden stakes

Procedure:

a. Read or tell the story of "The Flying War Club" found in Appendix Unit II-V, p. 178. This can be done in language arts on the day that this game activity will be conducted. The story provides a motivation for learning some basic physical skills as learned by the early Hawaiian warriors.

204

SOCIAL STUDIES

E.g.:

- seed pods, flower, wood shavings, bulbs } mea kanu (plant)
- animal fur, feathers, ivory } holoholona (animal)
- shells, seaweed, sand (in a plastic bag), coral } kai (sea)
- small pieces of lava, dirt (in a plastic bag), rocks } 'āina (land)

1. Place the closed shopping bag in view of all the children and arouse their curiosity by asking:
   a. Where did this bag come from?
   b. Where did the store get the package?
   c. Where did the producer get the package?
   d. Where did they get the material to make the package?
   e. What did that material come from?

SCIENCE/ENVIRONMENTAL EDUCATION

b. Have the children check their seeds everyday to watch the progress of its growth.

c. As the seeds are germinating, introduce a complete plant to the children and go over its parts:

   roots
   leaves
   stems
   root hairs

d. Open a mung bean seed and have the children observe the inside. Explain that the fleshy inside is the food (cotyledon) for the new plant.

e. Talk about the germination process of a mung bean seed. Ask:
   1) How long do you think it will take for the seeds to sprout?
   2) What would happen if we did not water the seed? Keep one paper towel unwatered and use it as a comparison.
   3) Will the plants look alike? Will all of the leaves look alike?

LANGUAGE ARTS

2. Letter writing
   a. After completing the brochure, conduct a lesson on writing friendly letters.
   b. Read a few letters to the children as examples.
   c. Talk about what should be included in the letter such as:
      - a description of the writer with likes and dislikes
      - reasons for writing
      - a paragraph about the school, community, interesting sites, etc.
   d. Teach them how to address an envelope.
   e. Introduce the children to the concept of a pen pal. Have them think of a place in Hawai'i they would like to visit and decide on a single location for the class.

MUSIC

Teacher preparation:

Set up a display of a variety of Hawaiian instruments.

ipu	'ulī'ulī
kāla'au	'ūlili
pū'ili	'ili'ili
kā'eke'eke	pūniu

See Appendix Unit II-G, p. 154.

The children are good resources. They may have these instruments at home or may have relatives who are willing to let them share them in school. Also see the Hawaiian Studies district resource teacher.

1. Introduce each instrument to the children and have them become familiar with the sound. Have the children who are hula dancers demonstrate how the instrument is used.

2. Talk about the natural resource that was used to produce the instrument. Encourage them to predict how the Hawaiians made these instruments and what natural material was used as a tool.

3. Take one of the instruments and play a rhythm with it. Have the children repeat the same rhythm with their hands.

ART

2. Creating travel posters

In preparation for the brochure mentioned in social studies lesson A.9., p. 84, have the children create an attractive poster showing a selected scenic spot on the island. The students should select one physical feature, one landmark and one activity to illustrate on their poster. Their island's name should be in large, black letters at the top or the bottom of the poster.

Materials needed:
butcher/wrapping/Kraft paper, 24" x 36"
tempera paints
brushes (various sizes)

a. Have the children draw a sketch of the poster. Have them plan the sketch so that the action taking place is the center of attention. Encourage them to center their titles so that their posters appear balanced.

b. Have them transfer their sketches to their poster paper using a variety of paint brushes.

c. After the paint dries, have them cut letters for their titles and glue them to the poster, being careful once again, to center the letters.

GAMES AND RECREATION

b. Refer to Mitchell. Hawaiian Games for Today, pp. 31-35 for directions.

c. Allow the children to handle the moa and ihe so they get used to the weight and size. Have them predict how much larger Palila's moa and ihe were compared to the ones they are using. The story talks about a "gigantic" knobbed club. Have the children dramatize the "gigantic" war club. Also have them imagine an ihe of "tremendous" proportions that could pierce a rain cloud and flood the island.

d. Have them practice and develop their skill in throwing the moa and ihe.

8. Invite other classes to a Makahiki or festival.

a. Children might serve as instructors or assistants.

b. Interested children might develop charts to show game rules, directions and/or techniques.

c. Explain how each game we play--active or quiet--will help to improve one of the following:

SOCIAL STUDIES

After they have established the source as being from a tree that grows on the land, identify the difference between natural and human-made. See Appendix Unit II-B, p. 137, for a worksheet.

f. At what stage did the paper bag change from a natural resource to a human-made item?

g. What then is the source of this paper bag? (land, plants and human technology)

h. What are some other sources from which we are able to obtain goods that we enjoy today? For example, from where did we get this pūpū (seashell)? (the kai - sea) Continue until the children name the four categories:

'āina (land)
kai (sea)
mea kanu (plant)
holoholona (animal)

Set up a display table with these four categories.

2. Some of the items may belong to more than one category. Pass the bag to one of the children and have him/her pick up one thing and without taking it out of the

SCIENCE/ENVIRONMENTAL EDUCATION

f. Keep a calendar of events; record everything that happens to the seeds from the first day until all the parts of the plant are observed (two weeks).

g. Have the children record the number of seeds that germinated and those that did not.

h. As the seeds continue to germinate, the children will be able to answer the questions above. Encourage them to experiment with other kinds of beans and seeds such as lima beans, Koa haole, grass seeds and bird seeds.

i. Talk about the variety of uses for sprouts. Have the children name some sprouts that are familiar to them.

E.g.: bean sprouts
alfalfa sprouts

Discuss the different ethnic uses of bean sprouts.

Japanese
Korean
Chinese
American (salads)

LANGUAGE ARTS

f. Write pen pal letters and include the brochures the children produced. Mail them to a school on the island or in the community the children selected. Use the DOE Directory for addresses.

C. Writing for specific purposes

1. Daily journal

Conduct a lesson on journal writing. Read some excerpts from books or from journals written in previous years by other children. Have the children write a daily journal of their observations in science. Encourage them to be specific and to write only what they actually see or do. They can also predict what will happen in the future, e.g., by tomorrow, the first leaf will appear.

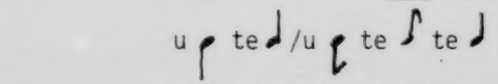
2. Creating and memorizing ōlelo no'eau (wise sayings)

Teacher preparation:

Study the news articles found in Appendix Unit II-C, pp. 138-147. Write the following 'ōlelo no'eau on the top line of a wall chart. "Uē ka lani, ola ka honua."

MUSIC

E.g., clap two ipu rhythms



and have the children echo the beat.

4. Add other instruments, one at a time and then do echo beating with an entire ensemble. Pass the instruments around so that the children experience playing all of them.

5. Show the Ahupua'a poster produced by the Kamehameha Schools. Locate the plants used to produce the instruments on the Ahupua'a poster and talk about the availability of the plants today. Have the school kupuna plan a demonstration lesson on the making of one of the instruments.

6. Plan a field trip to an ocean site or a nearby stream to gather 'ili'ili (pebbles). Teach the children a hula noho (sitting hula) using the 'ili'ili.

7. Plan a field trip to an area where lā'au (sticks) could be gathered or cut. Examples of wood that can be used are, hau, koa haole, milo and kuawa (guava). (Each stick should be

ART

d. Plan an exhibit of the posters, either in the cafeteria or in the library.

C. Environmental appreciation through various media

1. Illustrated multi-panel activity display

Children can have a great deal of fun sharing a little about themselves using a folding illustrated display.

Materials needed:
butcher/wrapping/Kraft paper,
4' long cut into 6" widths so that each child receives a length of paper measuring 6" x 48"
crayons or marking pens

a. Have the children make a list of ten activities they enjoy doing in the environment, e.g.:

1) Climb trees
2) Swim in the ocean
3) Play with my friends
4) Hike in the valleys
5) Play on the jungle gym
6) Swim in the pool

b. Have them prioritize their activities according to their favorite pastime.

GAMES AND RECREATION

1) Coordination
2) Physical strength
3) Agility
4) Mental concentration and strategy planning

D. Other ethnic games and physical culture arts

1. Have the children share games they learned from their parents. These may be active or quiet games that parents learned from their own culture.

E.g., Chinese Jump Rope
Japanese Jacks
Filipino Sipa

2. Encourage those children who are training in martial arts or other physical arts (e.g., Tai Chi, Ki) to demonstrate their skills, coordination, physical strength, agility and mental concentration and strategy planning.

3. Invite a martial arts or other physical culture person to come in to talk to the children about the skills involved in the art. Have the instructor engage the children in some basic movements. Encourage the speaker to explain the spiritual value of these arts...the harmony of self and nature.

Social Studies

bag, guess what it is using the sense of touch. After stating the guess, have him/her reveal it to the class and place it in the correct category on the display table. If everyone agrees that he/she is correct, continue to another child.

3. If a child picks up a bag of sand, he/she may have a difficult time identifying it as sand or dirt or sugar or salt. This is a good time to introduce the need for another sense, sight.

4. Continue this activity, building the children's awareness of natural resources and the use of the senses.

5. On a chart, have the children contribute a list of natural resources other than the four already listed. Encourage them to recall the natural features they studied in the location unit.

   E.g.: fresh water
   mountains
   trees
   minerals (e.g., salt)
   fish
   beautiful scenery
   nuts/fruit
   sunlight
   rain

213

Science/Environmental Education

If possible involve the parents in preparing some ethnic dishes for tasting. The children should be able to understand the value of young sprouts, both nutritionally and as an enhancement to variety in meals.

5. Ask:

   a. What natural resources are necessary for plant growth?

   b. What would happen if one of these resources were not available? (food chain would be broken)

   Talk about the importance of caring for our natural resources so that our natural environment can continue to thrive.

C. Distinguishing between natural resources and human-made materials.

1. Ask the students to contribute to a list of materials needed to build a house.

   a. Divide a chart paper into two columns and label them Interior / Exterior and commence to list as many products as possible.

Language Arts

a. Ask:

   Have any of you seen these words written on a building?

b. Introduce the words 'ōlelo no'eau (wise saying) to them and explain that this 'ōlelo no'eau is inscribed on the wall of the Board of Water Supply in Honolulu.

c. Discuss the meaning of the 'ōlelo no'eau: When the heavens weep, the earth lives. Ask: What do you think the Hawaiians meant by this wise saying?

d. Have the children create 'ōlelo no'eau on the theme of wai--fresh water. Have them write the 'ōlelo no'eau in English and insert Hawaiian words where appropriate. Also, the school kupuna can be asked to translate some of the 'ōlelo no'eau into Hawaiian.

3. Writing haiku

a. After reviewing what constitutes a haiku poem and discussing the importance

214

MUSIC

approximately 8-12 inches in length and ¼-1 inch in diameter.) Teach the children a hula noho (sitting hula) using kāla'au.

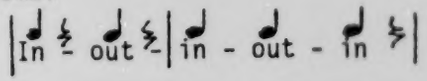
F. Song: "Nani Ke Ao Nei"
Sources: Aloha Council, Hawaiiana, pp. 140-142
Comprehensive Musicianship Program, Zone I, Book B, record and teacher's manual, pp. 146-149
Bowmar Records, Dances of Hawai'i, Ancient and Modern

1. Write the words on a wall chart with the interpretation.

2. Have the children point out Hawaiian words they are familiar with and underline them with a red pen. Encourage the children to guess the meanings of new words by looking at the interpretation.

3. Chant the first verse for the children. Read the translation with the children and have them create motions for the verse.

4. Teach each verse. Teach the rhythmic pattern to be used as the introduction, interlude and coda:



Have the children practice this rhythm as they chant the verses.

ART

c. Give each student a length of paper. Instruct them to fold it in half, then in half again, until the rectangular result measures 4" x 6".

d. Have them start their drawings on the second rectangle, leaving the first space for their title and artist's name. The bottom of each illustration will be on the 4" side so that the display can be folded and stand up to provide a 12-panel display.

e. When they have finished, have them create a title for the first rectangle and on the final space, write a short paragraph. "I am happiest when I can..."

2. Mural - The Ahupua'a

(This activity goes along with lesson D.2. in language arts on p.96.)

Materials needed:
large sheet of butcher/wrapping/ Kraft paper
tempera paint
brushes
glue
sand, shells, and other collage materials for composing a mural using collage technique

GAMES AND RECREATION

E. Aerobic dancing

This activity can be coordinated with the district resource teacher in physical education and with the music resource teacher.

Materials needed:
dance records
phonograph
each student should have a little towel

Procedure:

1. Ask:

   a. How do people keep physically fit today? (jogging, exercising, weight lifting, walking, and aerobics)

   b. How do you keep physically fit?

2. Do some warm-up exercises and some stretching with them.

3. Start off with some simple rhythms and dance patterns.

   a. Running in place

   b. Running forward four steps, running back, then right, then left.

   c. Step, kick with the other leg, etc.

   d. Jumping jacks, etc.

SOCIAL STUDIES

As they name things, write them down, even if they name human-made features. When they have exhausted their repertoire, go over the list once more and have them circle those features that are human-made, if any were named such as hotels, shopping centers, school, bridge, etc.

6. Have the children divide into 'ohana. Have them brainstorm a list of 15 items that are natural and/or human-made.

7. When they are done, have them switch lists with another group and once again, classify the items.

8. Have the children think of community helpers who depend upon natural resources for their occupations or bring in a collection of pictures of community helpers. Have the children determine which helpers depend on natural resources for their occupations.

   E.g.: lei maker
   tree trimmer
   forest ranger
   wild life manager
   taro farmer
   fisher
   resort staff
   tourist industry personnel
   water management personnel

SCIENCE/ENVIRONMENTAL EDUCATION

b. Have the children go home and observe their own homes and interview parents, friends and relatives who can add to the list.

c. When the list is completed, introduce the children to the concept of renewability. Have them research this word so that they have a clear idea of what this word means.

d. Apply this new concept to the list of building materials. Have the children indicate whether or not a resource is renewable by placing an asterisk (*) next to it.

e. Have the children draw their houses using as many of the materials on the list as possible.

   1) First, have them draw their pictures with no plants, no trees, no environmental additions. Place them on the chalkboard for everyone to see and evaluate the aesthetic appeal of each picture.

LANGUAGE ARTS

of wai, motivate the children to write haiku expressing their thoughts and feelings about wai.

E.g.: Crystal clear water
Flowing gently in
a stream
Cool and refreshing

b. After editing and rewriting, share these with others in a show-and-tell format.

c. Set up a bulletin board display of these haiku with illustrations.

D. Planning a class mural on the ahupua'a in which the school is located.

1. Using Appendix Unit II-O, p. 167 as a visual aid, talk about the uses of land.

   Ask:

   a. What kinds of things grow in the uka (uplands)? the kula (plains)? the kahakai (seashore)? in the kai (sea)?

   Write the children's answers on a wall chart.

MUSIC

5. Encourage the children to create their own motions for this hula noho. The step-by-step motions are given on pp. 147-149 of Comprehensive Musicianship, Zone 1, Book B or Aloha Council's Hawaiiana, pp. 140-142. The directions are for the hula kāla'au (stick dance). However, one may very easily use the pū'ili or hand motions or all three.

G. Song: "Lei 'Awapuhi" (Ginger Lei)
Source: Elbert and Mahoe. Nā Mele O Hawai'i Nei, pp. 73-74.
The chorus of this song is usually sung at many parties. This song tells of the beautiful ginger flower and compares it with a sweetheart.

1. Ask the children:

   a. Have you seen a lei maker? Where are these people located? (In florist shops, in lei shops, at the airport, lei stands, at home, etc.)

   b. How do many people get their lei? (Buy, make, someone gives them one, etc.)

   c. What are some of the reasons why we make and give lei?

ART

Procedure:

a. Having met in mini 'ohana for the planning of the sections of the mural, uka, kula, kahakai, kai, have the children now plan the total mural. Using their discussion notes, have them visualize their section on the total mural.

b. Have them meet in their 'ohana to sketch their ideas. Work on this draft form until all four 'ohana agree on the content and balance of elements in the sketches.

c. Have each 'ohana transfer their sketches to the final mural. Encourage them to practice the 'ohana concepts of:

   laulima - cooperation
   kōkua - help
   kuleana - responsibility
   alu like - work together
   lōkahi - harmony

3. Painting

Materials needed:
butcher paper, 24" x 36"
tempera paint, brushes

GAMES AND RECREATION

4. Increase the length of time each week. Have the children share some steps their parents or relatives may have taught them.

5. Call in an Aerobics dance instructor to demonstrate other steps and dance patterns.

6. Continue this activity throughout the year by using it as a warm-up exercise. Use the students as dance leaders.

SOCIAL STUDIES

Have them describe what each worker needs today compared to what they probably used long ago in early Hawai'i.

E.g.:

Worker	Yesterday	Today
farmer	'ō'ō (digging stick)	tractor, hoe, shovel, pick, metal 'ō'ō
lei maker	pua, ferns, maile, hau cord	pua, ferns, maile, needle, string

9. Talk about the importance of taking care of the environment so that these people can continue to engage in their occupations.

10. Ask:

    a. If we don't take care of our natural resources, what will be some consequences?

    b. What has already happened to some of the resources we used to have an abundance of? (fish, trees, birds, natural ponds, streams, mountains)

221

SCIENCE/ENVIRONMENTAL EDUCATION

    2) Then, have the children take their pictures and add trees, plants, birds, animals and a variety of other things they have around their homes that add to the aesthetic appeal of their homes. Evaluate again and have them generalize about how trees, and flowers and plants help make life more pleasant for people.

f. As an extended activity to improve observation skills, have the children look around the room and observe what they can see.

    1) Have them write a paragraph describing what they observe.

    2) Let a few days go by and secretly ask a few children (four or five) to bring in some plants to decorate the classroom.

        a) Observe the reactions. Have them write what changes they observe and what they feel.

LANGUAGE ARTS

    b. What do we have growing in these areas today? Are they the same as it used to be many years ago?

    c. How has our landscape changed? Talk about the environment in which your community is located.

2. Plan a class mural of the ahupua'a (land division) in which your school is located.

    a. Encourage the children to decide what should be shown on the mural. Divide the class into mini 'ohana, one for each section of land to be shown.

        Uka (uplands)
        Kula (plain)
        Kahakai (seashore)
        Kai (sea)

    b. Have each 'ohana meet to plan their portion of the mural. Each 'ohana will choose a haku (leader) to conduct the discussion and each participant should be encouraged to actively share in the planning.

222

MUSIC

hello
goodbye
congratulations
birthdays
dancing hula
decorations

d. Do you know how to make a lei?

e. Can you name as many different kinds of lei you have seen? (List them.)

2. Show them pictures of a variety of lei. See McDonald, Ka Lei. This source contains a history of the lei in Hawai'i and colored pictures of a variety of lei in Hawai'i.

3. Write the words of the chorus (hui) on a chart. Point out specific words:

nani - beauty
ahiahi - evening
lei 'awapuhi - ginger lei

4. Teach the song.

H. Song: "Wai O Ke Aniani"
Source: Nā Mele O Hawai'i Nei by Elbert and Māhoe, pp. 93-94
Recording: Note: Most recordings of this song feature the hui (chorus) mixed with the verses of

ART

Procedure:

a. Have the children identify a number of "eye-sore" spots they have observed in the neighborhood. E.g., Kapa'a Landfill and Kawainui Marsh Road, with old cars piled up three to six cars high; Waimea Bay along the highway.

b. Have them choose one site they are familiar with and visualize changes they would like to see there.

c. Motivate them to paint the site as they would like to see it with visual improvements. Encourage them to use natural improvements along with human-made improvements such as a pavilion.

d. Use these as a way of communicating with others about the importance of taking care of our environment.

4. Diorama

Materials needed:
boxes (shoe box size)
variety of collage materials
sand, dirt, gravel
scrap paper, glue, scissors
paint, brushes

GAMES AND RECREATION

- The following games can be used to build vocabulary related to this unit on natural resources and their uses.

A. Game - "Let's Go Swimming!"

See Appendix Unit II-L, p. 159

Number of players: Two to four

Materials needed:

1. gameboard, see Appendix Unit II-L[1], p. 159. Mount on oaktag and laminate.

2. token for each player (as in Monopoly)

3. picture cards (Picture card sheets may be photocopied and mounted on oaktag or similar heavy paper before cutting. See Appendix Unit II-L[1], pp. 160-161.

4. mounted and laminated number cards from Appendix Unit-IIL[1], p. 162.

Directions: The object is for a player to avoid being the last to reach the beach by moving his/her token along the prescribed path on the gameboard.

1. Each player draws a number card to determine order.

2. The player must pull a picture card and say it's Hawaiian name.

3. If the player is successful, he/she may draw a number card to advance.

Social Studies

Show some before and after pictures. Discuss the kinds of things people with their technology have done to change the environment and any problems that have resulted because of the change. Select one area in your community to study.

E.g., in Kāne'ohe on O'ahu, the fishponds were filled with earth to create land on which to build homes. This resulted in silt and pollution flowing into Kāne'ohe Bay and the eventual destruction of sea life in the bay.

E.g., the plains of Honolulu were tree-less and dusty in the mid-1800's but an abundance of "city" water, street plantings and home gardens have made Honolulu into a city very well-planted with greenery.

C. Importance of Wai (fresh water)

1. On chart paper, put the word "WAI" (fresh water) in the center. Have the students suggest how water is used. Write their responses around the focus word.

Science/Environmental Education

b) Have them list other changes they would like to have. Talk these over and plan how to go about making the changes.

2. Plan a field trip to see a wildlife conservation worker, a lumber distributor, a nursery worker, a forest ranger, or similar worker (see social studies lesson B.8.).

a. The children will prepare a list of interview questions to ask so that they will be able to find out how the occupations of these people depend upon the natural resources of our islands.

b. Conduct a group discussion and compile the information on a chart; then have the children suggest ways in which they can help keep these people working in their occupations.

3. Experimenting with the natural materials to create various colored dyes.

a. Have the children predict the source of the colors used by the Hawaiians in the making of

Language Arts

c. Determine who will be responsible for the variety of jobs that will need to be done on the mural.

d. Have 'ohana reports from each haku. Encourage everyone to be good listeners and to be ready with some positive suggestions.

e. When the reports are all done, evaluate the discussions they had in their mini 'ohana.

Ask:

1) Did everyone have a chance to participate and give suggestions?

2) Were you good listeners as well as contributors?

3) How could you have helped make the group perform better?

f. Now that the planning is done, the actual mural can be done in art. See art lesson C.2., p. 93.

MUSIC

another song. The verses of "Wai O Ke Aniani" are sung to the same melody as the chorus.

This song describes the mist of fine rain and the happy sound of water flowing over stones. Each kupuna may know special songs written about water or rain in your area. Ask about these songs and have them teach the songs to the children.

1. Write the words and translation on a chart. Go over the familiar vocabulary, then introduce new words to them, especially:

   noe - mist
   ua li'ili'i - fine rain
   'ili - stone
   'ala - scent
   hu'i - chilly
   ānuenue - rainbow

2. Point out Kahalu'u, O'ahu on the map of O'ahu. (See Nā Ki'i Ho'ona'auao for map.) Read the translation and explain that the song describes the cool, crystal wai in Kahalu'u. The Kahalu'u heiau (place of worship), Ka'ili kahi, is mentioned in verse 2.

3. Sing the song or play the record for the children. Teach them the song. Use the 'ukulele or guitar to accompany the singing.

ART

Have the children contribute bits and pieces for the collage.

Procedure:

a. Have the children plan an environment as it existed many years ago when the chief occupations were farming, house-building, fishing, kapa making and lau hala weaving.

b. Show them pictures of life in early Hawai'i from a variety of sources. E.g.:

   Feher. Hawai'i: A Pictorial History
   Scott. The Saga of the Sandwich Islands

c. Have the children select one occupation and recreate an ideal environment using all the ideas, concepts and techniques they have learned thus far.

d. Encourage them to be creative and guide their use of the materials. Introduce them to papier mâché as a means of building up the land if they so desire. This should be an ongoing project so that as the project goes along, the children can continue to add more things as the study continues.

GAMES AND RECREATION

4. If a player draws an 'umi (10) he/she gets an additional turn and an 'ole (0) means he/she must skip a turn.

5. If the player fails to name the object, he/she may not advance and the word card returns to the bottom of the deck.

B. Game - "Concentration"

Number of players: Two-four per set of cards

Materials needed:
A deck of playing cards made up of pairs - one a picture card and the other the matching Hawaiian word for the picture. Use the same deck as used in "Let's Go Swimming!" for the picture cards and paste up/cut out the word cards in Appendix II-L2, pp. 163-164 for this game.

Directions: The object is to match as many pairs as possible.

1. Play begins with all cards shuffled and placed face down.

2. Each player turns up two cards trying to locate matching pairs.

3. The player keeps matching pairs and replaces face down the ones that do not match.

4. The player with the most pairs at the end of the game is the winner.

SOCIAL STUDIES

2. Ask

   a. Which one of these activities associated with water can we live without? (i.e., washing cars, bathing . . .)

   b. What might happen if we did not water plants and crops or have enough water to drink?

   c. Long ago people could drink from our streams and rivers. Why don't people drink from streams and rivers today? (pollution)

   d. Where does our water come from? Might our supply run out someday? (See science lesson D, p. 108.)

3. Read some news articles about today's water problems. See Appendix Unit II-C, pp. 138-147.

   a. Have the children discuss the issues from the viewpoint of the Governor, the sugar growers, farmers, the Department of Health and home owners.

SCIENCE/ENVIRONMENTAL EDUCATION

kapa. Show them pictures of colored kapa or tell them the colors that were used in the production of kapa.

Carter, Gann. Sightseeing Historic Honolulu, p. 22.

b. Write the colors used by the Hawaiians in one column of a wall chart. In a second column, have the children predict a possible plant or other environmental element that may produce the color. ('alaea dirt, charcoal, urine, seawater, salt, etc.)

c. Have the children bring in a variety of plants or plant parts. Caution them about conservation practices.

d. Allow them to experiment to find out what color each item produces.

e. Have them record their findings in some format. They may be given 4" x 6" cards on which they can tape the source of the color obtained from the plant and write the name of the plant.

LANGUAGE ARTS

E. Listening to and discussing Hawaiian literature

Legend: "The Sacred Breadfruit Tree" found in The Water of Kāne by Pūku'i and Curtis, pp. 141-142. This legend illustrates the importance of the natural resources in the lives of the early Hawaiians and how they revered elements in nature.

1. Bring in a breadfruit so that the children can become acquainted with this plant.

2. Show them a picture of the tree or if one is available, show them the real tree.

3. Have the children locate the breadfruit trees on the Kamehameha Schools' Ahupua'a Poster (available for purchase by schools). Have them point to the location and indicate whether it grows in the kahakai, kula, or uka areas.

4. Ask

   a. What do you suppose the Hawaiians used the breadfruit for?

      . . . the fruit
      . . . the leaves
      . . . the wood

MUSIC

I. Song: "Koni Au"
Source: Elbert and Māhoe. Nā Mele O Hawai'i Nei, p. 68

1. Introduce the song to the children by having your kupuna sing it for them, or play a recording such as "Iā 'Oe E Ka Lā," LP Volume II, Nā Kāhili Records, Palani Vaughan.

2. Then locate Pua'ena in Waialua on the map of O'ahu and read the translation of the first verse and chorus to the children.

   Note: Teachers need to read the notes to the song on p. 68 to understand the kaona or underlying meaning which Kalākaua was applying to the word wai. The wai ali'i or royal liquid that he is throbbing for in this song is gin. This is probably why this song is so popular at parties.

3. Children can enjoy this song for it is a fun tune.

J. Song: "Huki I Ke Kalo"
Source: Kamehameha Schools. Explorations, 1981. Also, see Appendix Unit II-H, p. 155.
This is a simple chant that can be taught to the children to expose them to the steps of making poi.

ART

e. Share the dioramas with other classes. Set up a centralized display in the school.

5. Illustrations using collage techniques

Materials needed:
colored construction paper, 18" x 24"
cellophane
glue, scissors
tempera paint, brushes
collage materials

a. Have the children recall the 'ōlelo no'eau (wise sayings) they wrote in language arts.

b. Compose a quick sketch to illustrate the 'ōlelo no'eau of the Board of Water Supply. Have the children volunteer suggestions and do a quick pencil sketch for the 'ōlelo no'eau.

c. Motivate the children to do their own sketches for their own 'ōlelo no'eau. Have the children creatively use the materials they brought to complete their collage. The 'ōlelo no'eau should be written on the collage so that the whole picture balances.

GAMES AND RECREATION

C. Game - "Memory Circle"

This simple game can be played to improve the children's skill in listening and in remembering in a fun way. This game is based on the children's experiences in the environment in social studies.

1. Have the children sit in a circle. The first player begins by telling everyone what he/she has seen in a forest or in a special place they have been on a walk-tour. E.g., I saw a bird on a branch.

2. The next student adds to the story by repeating the statement made by the first player and then adds a statement to continue the story. E.g., I saw a bird on a branch. I took a picture of the bird, etc.

3. The game continues until the list is too long for the students to remember.

4. Write the children's statements on a chart and use it as a reading lesson. Have a few children dramatize the actions as the readers proceed with the reading. This creative fun activity can produce scripts that can be used for plays.

D. Creative personifications

The children will pretend they are some kind of plant in the forest or on the

Social Studies

b. Simulate a simple panel discussion using the news articles. Encourage all of the children to present their concerns during the questionning period. This activity would be an excellent preparation for the following experience.

4. Invite a speaker from the Board of Water Supply or similar agency to speak on water resources, where the reservoirs are located and a simple version of the process of getting the water to the homes.

   a. Have the children prepare a list of questions they would like answered by the resource speaker.

   b. Encourage them to include problems of water supply today.

Culmination:

Have the students prepare a campaign against the misuse of wai (water) in the school, home and community. They can create posters in art, write speeches in language arts, compose songs in music and create dances for their songs in physical education class. Present the total program at a school assembly.

Science/Environmental Education

Grapes

Resource: Krohn, Val Frieling. Hawai'i Dye Plants and Dye Recipes, 1980, University Press of Hawai'i.

4. Introduce the children to a variety of cooking methods involving natural resources used by some people in Hawai'i today. Using inquiry, have the children share what they know about the following methods of cooking, e.g.:

   - kālua--cooking outdoors in a covered pit or hole; an imu (underground oven).
   - laulau--steaming a food package wrapped in lā'ī (tī leaves) in an imu or steamer pot.
   - lāwalu--steaming by placing fish wrapped in kī leaves on hot coals.
   - pūlehu--broiling in hot embers.

Language Arts

See Appendix Unit II-P, p. 171.

5. Read the story. Have the children listen for nā mea kanu (the plants) that are mentioned in the story.

6. Discuss the story

   a. Where does the story take place? Locate Kalihi on the map.

   b. Where did Papa go the morning of our story? (windward beach)

   c. Where is the windward side of the island? Have the children show this on the map.

   d. Is that a long way to travel from Kalihi? How do you suppose she got there? Was there a tunnel in the mountain at the time of this story? Allow the children to predict the manner of travel over the Ko'olau Mountains in early Hawai'i.

MUSIC

1. Write the words on a chart. Discuss the steps involved in processing kalo into poi. Have the children share what they know about this native food product.

   a. Talk about the hard work involved in the raising of kalo and then in the preparation of poi.

   b. If a kupuna is available, have him/her talk about the importance of this food product and demonstrate the steps in making poi.

2. Chant the first verse for children and have them echo your chanting. Teach them the three basic verses. Use the ipu (gourd) as an accompaniment.

3. Create hula motions for each verse.

K. Song: "Nā Kumu Ola O Hawai'i"
Source: Kamehameha. Explorations, 1981, p. 75 or see Appendix Unit II-T, p. 176.

This song, written by two teachers well-versed in chant and hula, describes the resources of Hawai'i--the life-giving rain, the land, the forests, the sea, the canoe, and people.

ART

   d. Evaluate the exercise and plan a way of exhibiting the illustrations.

6. Montage (photography)

The children will all have their own ideas of what constitutes water conservation. Talk about ways of conserving water as members of an 'ohana, students at school, community members in an environment. Have the children take their own cameras and go into their environment to snap pictures of what they perceive as water conservation and/or water wastage. When the pictures are developed, discuss the results and categorize the pictures into Water Conservation or Water Wastage.

   a. Be sure the children write their names on all of their pictures.

   b. Have the children decide in which 'ohana they will work, Conservation or Wastage. Have them meet and decide how they want to set up their montage. Give each group bulletin board space.

      1) They will arrange their pictures in some kind of pattern.

GAMES AND RECREATION

school grounds. They will use their large and small muscles to react to descriptions like the ones below:

- Gentle breeze blowing
- Gentle rain falling
- Person climbing up your trunk
- Child carving initials on your trunk
- Birds nesting on your branches
- Strong winds blowing through your branches

This activity may be done in total group or in mini 'ohana. Discuss how each dramatized activity is beneficial or non-beneficial to the tree.

- The following game reinforces the study of well-known people, living and dead, from the students' community, Hawai'i, the United States and the world.

Game: "Know the Alaka'i (Leaders)"

This activity goes along with social studies lesson E on p. 116.

Number of players: Three-six

Materials needed:
gameboard
dice
token
3" x 5" information cards written in social studies

Social Studies

D. Influence of climate, land and natural resources on community life in Hawai'i.

1. Show the children pictures of communities in Hawai'i that are chilly, especially during the winter months.

E.g.: Volcano Village on Hawai'i
Haleakalā and Kula on Maui
Ridge areas on O'ahu like
Wahiawā, Wai'alae Iki,
Nu'uanu Pali
Koke'e on Kaua'i
Kala'e on Moloka'i
Lāna'i City on Lāna'i

Also show them some pictures of dry, arid areas like:

Ka'ū and North Kona on
Hawai'i
Kīhei and Lāhaina on Maui
Wai'anae on O'ahu
Kekaha and Mānā on Kaua'i
Ho'olehua and Maunaloa on
Moloka'i
Mānele on Lāna'i

a. Talk about the kind of clothing people have to wear in order to be comfortable in these kinds of environments. Have them study the plant life, the type of buildings

Science/Environmental Education

a. Write each method of cooking on a chart and have the children tell all they know about each method.

b. Invite a parent or community resource person to demonstrate one or more of these methods. (School kūpuna could do this very well.)

c. Have the children inquire about the kinds of foods that are cooked using each method. Then have them fill in the foods on the chart.

The final chart may appear like the one below:

Methods of Cooking	Definition	Foods
kālua laulau lāwalu pūlehu		

d. Discussion:

1) How do we cook our food today?

Language Arts

e. What did she do on the windward side?

f. What are some of the natural resources mentioned in the story?

g. What did she see as she was walking home?

h. What happened as she hurried home?

i. What was Papa wearing? (pā'ū) See Appendix Unit II-Q, p. 172 for a picture of a woman wearing a pā'ū (skirt) or see Nā Ki'i Ho'ona'auao wall chart "Kuleana" for a picture.

j. How did Papa save Makea? What is a kahuna? Why do you suppose they needed to put special things before the tree? Do we put special things like food in front of special places today? (Some people place food and/or flowers on graves and on altars, some people burn incense and/or candles, etc.)

MUSIC

Teacher preparation:

Write the words on a chart in Hawaiian and English.

Procedure:

1. Have the children identify the life-giving resources in the Hawaiian version, e.g.:

   lani - heaven
   ua - rain
   'āina - land
   ululā'au - forest
   kai - sea
   kanaka - person

2. Say the words for each verse and have the children repeat them after you.

3. Teach the chant, one verse at a time, and have the children chant it without depending on the chart.

4. Encourage them to create motions for each verse as they learn it.

5. Have the children beat ipu if they are available. Otherwise, they may use their hands to produce the basic ipu patterns shown on the music sheet.

ART

   2) They need to decide on a creative title.

c. Have the children react to the finished product. Do an inquiry. Encourage the children to ask questions, make suggestions and discuss issues. These activities may be continued in science or language arts class.

d. Evaluate the aesthetic appeal of each montage. Have the children share their feelings.

7. Logo - drawing and crayon resist

   Materials needed:
   drawing paper, 8½" x 11"
   colored pens
   silkscreen
   T-shirts
   textile paint
   waxed crayon

   a. Select a theme dealing with the conservation of natural resources. E.g., the state logo for the litter program--"Lend a hand to clean our land." Show them a picture of the logo.

   b. Motivate the children to create an original logo of their own.

GAMES AND RECREATION

Directions:

1. Construct a gameboard like the sample. (See Appendix Unit II-U, p. 177.)

2. The object of the game is to advance through the board and be the first to finish.

3. In order to advance, the player must name the important person being described on the information card. Data for the information cards are formulated by the group that did the research on the famous person.

4. The playing order is determined by the toss of the dice or make a spinner on a numbered card.

5. The player picks an information card and reads it. Player must correctly identify the person being described.

6. If the player is correct, player advances the number of blocks shown on the dice which were tossed. If incorrect, the player cannot advance.

7. Answers to all the cards should be provided on a coded answer card. If the player's answer is correct, the player advances.

8. More cards of famous or well-known leaders may be added to the card pile as time and additional study progresses.

SOCIAL STUDIES

(some with chimneys) and the clothing worn by the people in the pictures.

b. Ask

1) Are there significant differences in the way the people dress in the various areas? What are they?

2) Are there differences in the structure of the homes? What are they?

3) If you were to go on a trip to Haleakalā which has a cool temperature of about 40°, what kind of clothing would you wear?

4) If you were to go to a dry, arid area like Wai'anae, how would you dress?

2. Divide the children into 'ohana and have them write a group story about the picture they select. They should include information about:

a. the climate;

b. the land and what they think could be raised on it;

241

SCIENCE/ENVIRONMENTAL EDUCATION

2) What natural resources do we use today to do our cooking?

3) What natural resources were available to the early Hawaiians for their cooking?

4) What does this tell you about these early Hawaiians who lived in Hawai'i when there was no electricity? (they were hard working people; they made good use of their environment to meet their basic need for food; they were farmers and/or fishers and had to raise and catch their own food, etc.)

Culmination:

1. Plan a simple pā'ina (meal) with the cafeteria manager, parents, children and school kūpuna (if available). This is a good time to demonstrate some of the methods of cooking.

2. Involve the children in preparing the imu; e.g., gathering rocks, the kī and mai'a (banana) leaves and digging the hole.

LANGUAGE ARTS

k. Who do you think helped Makea and Papa escape?

l. What does this story tell us about the importance of natural resources to the early Hawaiians?

F. Reading and appreciating Hawaiian poetry

Source: Elbert and Māhoe. Nā Mele O Hawai'i Nei, p. 50. This resource is readily available in most school libraries.

The ua (rain) and makani (wind) were very important to the Hawaiian people who were very observant of the beautiful environment in which they lived. They had names for the wind and rains in different locations. This is well demonstrated in the song "Hilo Hanakahi." Write the words on a wall chart, English as well as Hawaiian.

1. Locate Hilo on the island map and introduce the children to the island winds and rains of Hawai'i, the largest island in the Hawaiian chain.

2. As each verse is introduced, locate the place mentioned in the verse on the island map of Hawai'i.

242

MUSIC

6. Motivate the children to write two-line verses of their own to add to the song. The school kupuna or Hawaiian Studies resource teacher in your district will be able to assist in translation.

L. Song: "Hawaiian Rough Riders"
Source: Hausman. Hawai'i: Music in Its History, pp. 88-89.
Also available in Elbert/Māhoe. Nā Mele O Hawai'i Nei, pp. 42-43 (This source gives the historical background of this song which is also sometimes called, "Kilakila Nā Rough Riders.")

For so many of our students, cattle ranching is almost an unknown experience. However, there are places on most of the islands where the children may be able to go to see a rodeo, cattle branding, or cattle round-up. See TAC guide, 1982, for a listing of video available. E.g., #0611-1, "'Ulupalakua Ranch" depicts a day with the cowboys of 'Ulupalakua Ranch, Maui, as they perform their various responsibilities.

1. Introduce the song to the children by telling them the history of cattle ranching in Hawai'i. See p. 90 of the above resource (Hausman).

ART

c. Have them draw the logos on 8½" x 11" drawing paper and finish their drawings using colored pens.

d. Transfer the original drawing onto a T-shirt using a waxed crayon. Using silkscreening techniques, commence to silkscreen the design on to the shirts. See an art resource teacher if kōkua is needed with these techniques.

8. Drawing using craypas

(See Appendix Unit II-H, p. 155. for steps in making poi.)

a. Have the children review the steps in making poi and show them the music chart.

b. Ask the children if they can think of additional steps that may be involved. Add these new steps to the chart in the correct sequence.

c. Give the students each a sheet of 24" x 36" drawing paper and have each child compose an illustration showing the steps involved in poi production.

d. Teach children how to highlight the most important parts of their drawing either by enlarg-

HEALTH

- As the children study the natural resources of their community and island, some awareness activities may be conducted dealing with the use of these resources for medicine, as used by the Hawaiians both in early times and now.

A. Medicinal practices today

1. Ask the children:

a. What do we do today when we become ill or fall and hurt ourselves?

b. Who takes care of us? (mom, dad, older sister, doctor)?

c. Where do we go when we are seriously ill with a fever or are involved in a more serious fall or car accident? (hospital)

2. Continue this discussion and have the children share any personal experiences they may have had in a hospital or other situations where health services were provided.

3. Talk about the process one has to go through to see a doctor.

a. For a non-serious illness like a cold.

b. For an emergency like a car accident.

Social Studies

c. the kind of homes and clothing;

d. the food the people eat; and

e. the kinds of activities the people engage in, especially the children.

3. When the mini 'ohana are done with their stories, have them share with the other 'ohana.

4. On a wall map have the children identify some other communities in the world that may be enjoying the same kind of climate we have in Hawai'i. (other equatorial islands)

5. Encourage them to go to the library to borrow some books on life in these identified communities to see if it really is like life in Hawai'i. An encyclopedia can also be used as a reference book.

6. Motivate the children to use the library as a resource for further inquiry. Set up a library corner in the classroom to accommodate this kind of investigation.

7. As the research continues, have the children share new discoveries they make about people in other

Science/Environmental Education

3. Have the children sing and dance some of the songs learned in music.

4. Evaluate the activity.

D. Sources of Hawai'i's wai (fresh water)

1. Have the children name sources and locations of fresh water. E.g.:

rain	waterfalls	ponds
snow	flumes	pipes
wells	ditches	fountains
rivers	tunnels	springs
streams	pools	faucets

Write these on a chart.

Discussion:

a. Where did the water come from?

b. If it did not rain for a long period of time, where would we get wai?

c. Where else do we have water in Hawai'i besides the sources named above? (Kai/Ocean) Is it fresh water?

2. Explain briefly how the sun evaporates the sea water which becomes water vapor in the air. When this vapor cools, it forms around a dust particle. When the air cools, the water vapor condenses into droplets and forms clouds. When the droplets get too heavy, they fall as rain.

Language Arts

3. Have the children read the verses in Hawaiian and learn some of the new vocabulary.

E.g.: ua - rain
kani - rustling
paia 'ala - fragrant bowers
makani - wind
kuehu lepo - dirt scattering

4. This song may be taught in music or in a language arts as a fun way of reading.

G. Dramatizing creative expression

(Do the following activity after the health/nutrition activities #1-7, pp. 107-111)

Creative movement

Have the children experience some creative expression through dramatization.

Say:

We are all poi people today. We're going to have some fun with our bodies.

Move your bodies to show what thick poi would look like as I stir it in a bowl.

Use the following clues to elicit different levels of movement:

MUSIC

2. Locate the Parker Ranch at Waimea on the island of Hawai'i using the Nā Ki'i Ho'ona'auao map.

3. Point out some key words that they should learn:

   kilakila - magnificent, majestic
   ua kīpu'upu'u - the rain of Waimea
   hae - flag
   lanakila - victory
   hu'i 'eha - aches and pain
   konikoni - throbbing
   pu'uwai - heart

4. Go over the words with the children, saying them in rhythm.

5. Sing the song for them, encourage them to sing along and to interject the cowboy whoop call to create some atmosphere.

6. Using the English interpretation in the book, have the children create the motions for the verses.

M. Listening to country-western type singing by a popular artist

1. Encourage the children to bring in tapes or records of country-western songs. Melveen Leed has some albums out that are typical of this style.

ART

ing, outlining with black, or using color against black and white.

e. Teach children how to center their drawing by dividing their paper into even sections first.

9. Painting group movie roll

If a group art project is preferred, the children may be organized into mini 'ohana to work on a movie roll presentation of "Processing Poi in Hawai'i Today."

a. Each 'ohana will decide on the step in the poimaking process they would like to illustrate.

b. Have each 'ohana meet to come to some consensus. Remind them to practice the 'ohana concepts as they engage in this decision making process.

c. Having decided, each 'ohana will plan their illustration and laulima and alu like to complete the project.

d. Reminders:

1) Fill the entire drawing space using figures large enough so they can be seen easily.

HEALTH

Discuss the sequence of events that take place when a serious accident occurs. (ambulance, medics' care, emergency room, doctor, specialists involved, surgical room, etc.)

4. Write the sequence of events on a chart and then have the children indicate all the community helpers who are involved in caring for the accident victim.

5. Focus the children's attention on the modern technology that is available to people today to keep them well. Have them name some of the modern tools found in a doctor's office or a hospital. E.g.:

   blood pressure detector
   electronic thermometer
   x-ray machines
   renal dialysis machines
   body scanner
   ultrasound detection equipment

6. Resource speaker

   If the children are not aware of the more sophisticated machines, call the Hawai'i Medical Association at 536-6988 and ask for help with a guest speaker. The Speakers' Bureau will accommodate you with a speaker, given two to three weeks' notice.

SOCIAL STUDIES

countries and how they utilize their resources to make living comfortable for themselves.

8. Set up a bulletin board display showing several countries and their utilization of natural resources. Have the children watch for similarities and differences and have them discuss reasons why these occur.

9. Ask the children:

   What are some of the things you would not have

   ...if there were no trees
   ...if there were no plants
   ...if there was no water
   ...if there was no sun

10. Help the children become aware that the climate of a region and the kind of soil are two factors that influence the kinds of crops and animals that communities raise and therefore the kinds of food they eat.

    Sample questions:

    a. Do pineapples grow everywhere? What kind of environment do they need? Can they grow in cold areas like Haleakalā or the Nu'uanu Pali?

SCIENCE/ENVIRONMENTAL EDUCATION

3. Have the children go outdoors to look at clouds.

   a. Introduce them to the Hawaiian word for clouds: nā ao. Encourage them to notice the cloud colors, shapes and the distances from the earth.

   b. Have the children go home and look through magazines for pictures of different kinds of clouds seen all over the world. Encourage them to use the encyclopedia to find some information about clouds. Motivate them to become cloud watchers and to sketch clouds for a few days to observe changes.

4. Have the children draw a picture of the water cycle. See Appendix Unit II-F, p. 153. Encourage them to use arrows to show the direction of the water flow.

   a. Discussion:

      1) Where does the water go when it falls as rain?

      2) How do we trap enough water to supply all of Hawai'i with water?

      3) How did the early Hawaiians have enough water to irrigate their kalo?

LANGUAGE ARTS

1. I'm the spoon and I'm lifting you up and out of the bowl.

2. Now I'm letting you slide slowly, sluggishly back into the bowl because you are too thick.

3. I'm the spoon and the spoon is stirring more water into the thick poi, first mixing slowly . . . slowly . . . now the spoon moves more smoothly as the poi thins out.

4. Now I'm testing the consistency of the poi again. I'm lifting you up onto the spoon and letting you slide smoothly back into the bowl.

5. Ahh! Now you are ready to spoon into bowls. Each of you will be a scoop of poi. Show me how you slide off the spoon and fill the bowl settling into the bowl. (At this point in the exercise, if the children are willing, take them one at a time or in groups of four or five.)

6. Since poi is mixed by hand instead of spoon in many families, this activity might also be done using clues relating to hand mixing.

MUSIC

a. Melveen Leed's Grand Ole Hawaiian Music Nashville Style, Lehua Records, SL7053.

b. My Hawaiian Country, Lehua Records, SL7022.

2. There are a few songs that the children may enjoy learning, such as "Paniolo Country" or some other fun song on the recording.

3. Have them listen to other country-western artists from the mainland. They can learn a great deal about rural and ranch living by listening to songs.

N. Songs written for famous people in Hawai'i's history

Song: "'Āinahau" (hau - tree land)
Sources: Hausman. Hawai'i: Music in Its History, pp 39-41
Elbert and Māhoe. Nā Mele O Hawai'i Nei, pp. 30-31

Preparation:

Write the words on a chart in Hawaiian as well as in English.

1. Having read the story of Princess Ka'iulani to the children in language arts, introduce this song written by Ka'iulani's

ART

2) Remember that things and objects in the distance must be smaller than those that appear up front.

10. Mobile - sealife

a. Use tempera or crayons to draw large sea creatures (3-6 inches)

b. After completing one drawing, use it as a pattern for a double-sided figure.

c. Color the second side exactly the same as the first (on the opposite side).

d. Glue the two sides together only on the edges. An opening should be left for stuffing.

e. After the glue has dried, stuff the figure with shredded newspaper, paper scraps or packing foam.

f. The effect should give the original flat figure more of a three-dimensional shape.

g. Attach each piece to two lengths of blue yarn, one attached at the top of the figure and the other to the bottom.

h. Attach and balance all the sea creatures on a wire hanger.

HEALTH

7. Field trip

To further the childrens' awareness, plan a field trip to a hospital or a doctor's office and/or a dentist's office. Plan the trip with the doctor in charge so that specific objectives are met.

8. Videotape viewing

Call TAC (Technical Assistance Center) for the video on Kapi'olani Hospital, #0122-1. This is a 17-minute color video about the services that are available at the hospital.

9. TEL MED, ph. 521-0711

Have available the TEL MED brochure of topics and numbers. Share the appropriate topics that may tie in with the kinds of health topics you cover in your class. Call the Hawai'i Medical Service Association at 944-2414. A staff member generally is available to service teachers and/or students on the TEL MED program, K-12.

B. Medicinal practices in early Hawai'i

To conduct the following activities, it would be beneficial to read the following resources for background. These are available in all regional libraries and most school libraries.

SOCIAL STUDIES

b. Can we raise peaches in Hawai'i? Where do peaches grow well? Why?

c. Do we raise cows in Hawai'i? What products do we get from cows? (milk, leather, hamburger, steaks, manure for fertilizer/compost, etc.)

11. Stimulate a discussion of ranching and have the children share what they know about the production of meat. Start with the birth of a calf.

a. Raised on milk and then grass, then grains.

b. Trucks take them to feed lots.

c. Meat processors buy cattle at the feed lot.

d. Meat packers slaughter the cows and dress the carcasses for store distribution.

e. Stores buy the meat and butchers prepare the various cuts.

f. People buy the meat from the stores.

SCIENCE/ENVIRONMENTAL EDUCATION

b. Present simple explanations of how ground water is collected and stored underground and how some surface water travels downhill and moves towards the sea. When this movement is fast, it carries pebbles, rocks, soil and other debris with it. Where there is a lot of rain, lots of water collects underground. (If available, take the children to see a fresh water spring or pool to see water bubbling up.)

c. The following questions can be used to discuss other issues concerning wai:

1) Why is it not a very safe practice to drink water from any free running source today?

2) What will happen if there is a sudden change in weather which causes a decrease in rain? (drought) Was it wetter or drier last year? How can we see if there is a drought? (The hills are brown; there's more dust, etc.)

LANGUAGE ARTS

7. Have some poi available. Allow everyone to sample the poi. Ask them to focus on the smell and texture as well as the taste.

a. Say

You have all had a taste of poi. You have all seen and experienced the texture.

b. Writing

1) Write words that describe poi.

2) Students write simple similes.
Sticky like _____.
Thick like _____.

c. View Taro Tales (ETV production). Focus on the processing of the kalo into poi.

d. Writing

Have students write their own "Kalo Books." After drawing illustrations that depict the steps in making poi (can be done in art), they will write a sentence or paragraph to accompany their illustrations.

MUSIC

mother, Princess Likelike. Show the children a picture of the Princess Ka'iulani Hotel if one is available.

2. Introduce the song to the children. The music is available in the Hausman reference.

   a. Cover the English translation.

   b. Go over the Hawaiian words with the children, underlining those words that are familiar to the children.

   c. Have the children read the English translation and find the Hawaiian counterpart so as to expand their repertoire of Hawaiian words. E.g.:

      liko - bud
      manu pikake - peacock
      hulu melemele - yellow feathers

   d. Sing the song for them and have them sing along if they know it.

   e. Teach them both verses along with the hui (chorus).

ART

   i. Between the sea creatures, hang lengths of blue and green yarn, crepe, or tissue paper to suggest water and sea plants.

11. Illustrations/book covers

Materials needed:
crayons
drawing paper, 8½" x 11"
raffia
wheat paste
wrapping paper
cardboard
fadeless paper

Procedure:

   a. After the children have written their stories in language arts lesson I, p. 118, have them plan a series of illustrations for their stories.

   b. Motivate them to draw pictures of "before" and "after" the drought and some action pictures to add interest to the stories. Fill up all the empty spaces and encourage them to draw large figures, avoiding tiny representations.

   c. Make hard bookcovers for the storybook using two pieces of cardboard or crescent board. Cut these to size 9" x 12". Cover these with fadeless paper using wheat paste.

HEALTH

Curtis. Life in Old Hawai'i, pp. 244-255
Gutmanis. Kahuna Lā'au Lapa'au
Mitchell. Resource Units in Hawaiian Culture, 1982 edition

1. Bring in some plants that were used by the Hawaiians for curing some illnesses. See Mitchell's reference for a list of plants and uses on pp. 235-240 in the 1982 edition. E.g.:
   mountain ginger - underground stems used for toothache
   'ēkaha (birdnest) - leaves were steeped for tea to treat weakness
   hāpu'u (tree fern) - the silky pulu was used to pad bandages
   ki or ti - fresh leaves were used to cool the patient's brow and relieve a headache; the new, unfurled leaf could serve as a sterile wound covering
   (There are many others listed in Mitchell's and Gutmanis' books.)

2. Set up a table display of these plants and write the following title on a card: "The cures of an early Hawaiian doctor."

3. Have the children do inquiry by allowing them to predict how each plant was used. This can be done individually or as a group by numbering each plant and giving each individual or group a sheet of paper like the one in Appendix Unit II-N, p. 166.

SOCIAL STUDIES

12. Have the children set up a chart showing this food chain in sequence.

    See Appendix Unit II-D, p. 148 for a visual aid depicting the food chain. The children may be able to find pictures in magazines or may choose to draw their own pictures.

    a. Ask:

        1) What would happen if suddenly there was a drought? What would happen to our food chain?

        2) What would happen if the meatpackers went on a strike?

    b. Continue with this line of questioning to show the children another side of the interdependent nature of community living and the importance of preserving and conserving our natural resources.

    c. Since we live in an island community, we can go one step further and ask:

        Where do we get our supply of grain to feed the cattle we raise in Hawai'i? (mainland)

SCIENCE/ENVIRONMENTAL EDUCATION

        3) What kinds of things can we do to produce water if our natural supply is depleted? (desalinization)

        4) What can we do to prevent wastage of water at school, at home, and in the community?

5. Set up a series of scientific experiments to demonstrate the effects of the environment on water. (pollution)

    a. Prepare slide(s) of tap water for students to observe under a microscope. Have the students draw what they see.

    b. Prepare slides of water from other sources like a nearby stream, river, pond or pool.

    c. Have the children place a few containers of water in the room. Add different things (dirt, plant refuse, bugs, etc.) to the containers and observe what happens to the water in each container after two weeks.

        1) Talk about stagnant water and what conditions cause water to stagnate.

LANGUAGE ARTS

    e. Writing

        Students will write a script to accompany a "movie-roll" on "The processing of <u>poi</u> in Hawai'i today."

    f. Ask

        How did the writers of <u>Taro Tales</u> try to make their story interesting?

    g. When the script is completed and the movie is finished in art (see art lesson C.9., p. 109), share the entire program with other classes.

H. Stories of origin

    Source: Pūku'i and Curtis, <u>Tales of the Menehune</u>, pp. 96-98, "Water-Without-Source." This story is about a village of people in windward O'ahu who had to leave their beloved homes because of a drought.

    1. Ask the children to describe what happens to a land area when a drought occurs.

        a. What happens to the plants and crops?

MUSIC

3. Have the children think about the meaning of the song as they sing. Encourage them to sing with feeling, with aloha for a home that they love.

4. Accompany the song with the autoharp. Have one of the students learn the keys.

O. Song: Teach students Lili'uokalani's, "Aloha 'Oe."
Sources: King. King's Book of Hawaiian Melodies, p. 130
Elbert and Māhoe. Nā Mele O Hawai'i Nei, pp. 35-36.

P. Song: "Hawai'i Pono'i" by King Kalākau'a and Henry Berger
Sources: Hausman. Hawai'i: Music in Its History (Share the information on p. 59.)
Elbert and Māhoe. Nā Mele O Hawai'i Nei, pp. 43-44

Q. Song: "Makalapua"
Sources: Elbert and Māhoe. Nā Mele O Hawai'i Nei, pp. 75-76
Hausman. Hawai'i: Music in Its History, pp. 76-77
King. Songs of Hawai'i, pp. 112-113
Queen Liliu'okalani was the only female ruling monarch. Her foster mother, Konia, took the words of this song from an old chant. The music was composed by Eliza Holt. Lili'uokalani was called Lili'u and Kamaka'eha and these two names

ART

1) Have the children select the color they want to use as a cover. Work with the students in small groups; some can be working on covers while others work on printing titles, writing title pages, writing dedications and finishing illustrations for the story and the cover.

2) Punch three holes in each book and bind the books with raffia that has been braided for extra strength or with some kind of nylon cordage or ribbon.

3) Set up a display of the finished products in a centralized place, e.g., a display table in the library

12. Painting - Princess Ka'iulani's home

Materials needed:
butcher/wrapping/Kraft paper, 24" x 36"
tempera paints
paint brushes

a. After the children have heard the story of Princess Ka'iulani and have been exposed to the song "'Āinahau" in music, have

NUTRITION

- People in a community use their natural resources to meet their need for food.

1. Pre-quiz

Given a list of foods, the children will be able to circle the names of "Hawaiian" foods. Given this same list of foods the children will be able to categorize them as:

Mea'ai Hawai'i Kahiko (Early Hawaiian food)	Mea'ai Hawai'i Hou (Introduced Hawaiian food)
e.g., Pua'a Kālua	e.g., Lomi Salmon

2. Charting

Assign a worksheet designed to help the children keep track of what they eat for a two days.

	Day 1	Day 2
Breakfast		
Lunch		
Dinner		

3. Ask:

(Looking at their charts after two days, students will respond to the following questions.)

a. How many of you have listed something that you ate every day or nearly every day? List the students' responses. (bread, rice, milk, potato, etc.)

SOCIAL STUDIES

If we did not have air and ocean transportation, what could happen to the cattle industry? Do we raise enough cattle to feed everyone in Hawai'i?

d. Encourage the children to find answers to these questions by asking their parents, store owners and cattle ranchers.

e. Continue to work on the food chain chart adding information as the research continues.

Culmination:

Have the children prepare a list of foods. Compile them on a wall chart. Divide the children into mini 'ohana and have each 'ohana select one food product from the chart. Each 'ohana will compose a food chain chart for the selected food product. The important step is to identify the original natural resource.

E. Learning about the past to understand the present.

Teacher preparation:

Look for pictures of famous men or women in our country and the world community such as:

SCIENCE/ENVIRONMENTAL EDUCATION

2) Have the children smell the water. Then ask:

a) The Hawaiians planted kalo in patches. Do we still have lo'i kalo today? (yes) What would happen to the kalo if the water became stagnant? (Kalo would rot, become diseased, not grow so well.)

b) How did the Hawaiians prevent the water from stagnating? Show them a picture of early Hawaiian lo'i kalo. See Kamehameha Schools' The Ahupua'a. This is a large wall chart depicting life in a typical land division, ahupua'a. Point out the draining of the water and the constant flow pattern.

6. Plan a field trip to a lo'i kalo, a lotus patch or a watercress farm to show them how farmers prevent stagnation. Have the farmers talk with the children about water problems and the ecosystem involved in the production of these crops today.

LANGUAGE ARTS

b. What causes a drought? Encourage the children to look it up in science books and in encyclopedias and dictionaries.

2. Introduce the story to the children encouraging them to listen for the effects of the drought on the land.

3. Discussion

a. What was the most important natural resource in the story that affected the lives of many people living in the village?

b. Describe what happened to the land when the drought occurred.

c. What did the people do?

d. Why did the two old men refuse to go? What did they have that the other villagers did not have? (experience, faith in the gods)

e. What happened to the drought-stricken land when the young men returned?

MUSIC

appear in the song. Also contained within the song are some place names on O'ahu and a variety of lei.

Preparation:

Read about Queen Lili'uokalani in Mrantz, Women of Old Hawai'i, pp. 34-37.

Write the words of "Makalapua" on a chart, Hawaiian on one side and English on the other side. Elbert and Māhoe's book contains all four verses.

1. Share a picture of the Queen with the children as you tell them a little about Queen Lili'u's life.

2. Introduce the song to the children by sharing some background on how it came to be written.

3. Present the words to the children. Have them read the words to the first verse with you. Then go back and underline the the words that are familiar to them. E.g.:

   lei - wreath
   maka - part of Kamaka'eha, Lili'u's name, meaning "the sore eye"
   ka - the (singular)
   wāhine - ladies
   pua - flowers

ART

them do a painting of 'Āinahau, the home of Princess Ka'iulani. Encourage them to recall the scenes described in the story and the song. Play a recording of the song in the background as the children engage in this activity to create a serene environment.

b. Talk about colors and their effects on mood. Encourage the children to create a picture that best illustrates the mood of what they have learned about Princess Ka'iulani's life.

13. Montage

Materials needed:
drawing paper, 8½" x 11"
colored pens
glue, scissors

Procedure:

a. Have the children think about the story they heard in language arts about Ka'iulani (lesson K.3., p. 122).

b. Ask them to recall the important events, hobbies and interests of Ka'iulani. List these on a chart.

c. Have the children select one event, hobby, interest or

NUTRITION

b. Focusing on the carbohydrates

In Hawai'i kahiko what did the Hawaiians have as staple foods? (kalo/poi; 'uala; 'ulu; mai'a)

Explain the term "staple" to the children, then talk about staple foods of other ethnic groups. E.g.:

Japanese - rice
Chinese - rice
Korean - rice
Filipino - rice
Germans/Irish - potato
French - bread
Italian - pasta

4. Show an illustration of someone eating poi. Source: Feher, Hawai'i: A Pictorial History, p. 41.

5. Say:

Poi is made from the corm or underground stem of a plant called kalo.

Show an illustration of the kalo plant. See Appendix Unit II-I, p. 156.

6. Ask:

a. Does anyone have a plant like this at home? (Show a kalo plant.)

b. Will you bring a plant like this to school?

SOCIAL STUDIES

Abraham Lincoln
John F. Kennedy
Lech Walensa of Poland
Marie Curie of France
Emperor Hirohito of Japan
Mahatma Ghandi of India
Winston Churchill of England
Queen Elizabeth II of England

Prepare a bulletin board with the title: "Family Members Help The Country in Special Ways." (The term "family member" is being used to refer to those individuals being studied who are members of a family unit of their own. The children will identify with them as being a member of an 'ohana.)

1. Mount a picture of Abraham Lincoln on the bulletin board. Have the children describe reasons why we remember Lincoln. Use the encyclopedia for more information and pictures about this great leader.

2. Continue with the other pictures you collected.

3. Locate the countries these famous people helped.

4. Divide the children into 4-6 'ohana. Have them look at a political map and then choose one of the countries shown on the map.

SCIENCE/ENVIRONMENTAL EDUCATION

7. View "Taro Tales" (see the TAC video guide). This is a 20-minute video that develops an awareness of the legendary historical and cultural aspects of taro in Hawai'i.

   a. Using a retrieval chart, see how much the children learned about kalo:

      1) Review the two systems of kalo cultivation:

         a) Wet, irrigated or low land cultivation

         b) Dryland or upland cultivation

      (Send to UH-College of Tropical Agriculture and Human Resources, Hawai'i Cooperative Extension Service, UH, Honolulu, Hawai'i, 96822, for Home Garden Vegetable Series, No. 18, "Upland Taro.")

      2) Discuss the advantages of each. Read to the children from Begley, Taro in Hawai'i.

   b. Have a community resource person talk to the children about the kind of soil and

LANGUAGE ARTS

   f. What does the title "Water-Without-Source" mean to you? Is there really a stream without a source? What is the source of a waterfall?

I. Writing stories with environmental themes

   1. Have the children imagine themselves as living on a ranch raising cattle somewhere on the island. Have them describe the land area and the general location. Suddenly during the summer, an unusual drought takes place. Have them write a descriptive story of what changes take place in their family throughout the drought period. Encourage the children to be creative and to describe the changes in the appearance of the land, the cattle, and the overall environment.

   2. As they write, have them think of illustrations they may want to include and mark the places in the story with an X.

   3. When they are done, have them share their stories with the class.

MUSIC

Using the English translation, encourage the children to learn more vocabulary by continuing this activity until they have gone through all four verses.

4. There are several kinds of lei named in the song and also several native ferns and grasses. The song is very descriptive and full of imagery.

5. Have the children learn the first verse and the hui (chorus). If they are motivated, they can easily learn more.

6. Divide the group into three 'ohana and have them create motions for the song.

7. Have them share their creations with the total group.

8. Share the song and motions.

R. Song: "E Manono Lā Ea"
Source: Comprehensive Musicianship Through Classroom Music, Zone I, Book A, pp. 90-94
This song tells of Manono, wife of high chief Kekuaokalani of Puna, who led a band of rebel warriors against Queen Ka'ahumanu and King Liholiho who chose to break the sacred eating

ART

person in the princess' life that they would like to illustrate.

d. Encourage them to illustrate it using colored pens.

e. When the drawings are completed have the children plan the placement of the pictures to form a montage. Display it on the bulletin board.

14. Display of souvenirs/mementos (Note: Explain to the children that souvenir is the French word for "to remember" and memento is from the Latin word "to remember" so both words refer to things that help recall pleasant memories of people and places.)

To accompany L.A. lesson K.6., p. 124, have the children collect a few souvenirs/mementos that are of some significance to them because their mākua (parents) or kūpuna (grandparents) gave the articles to them. Or, have them talk to their 'ohana about this project and have them ask their mākua/kūpuna to loan a few possessions that they could share with the class, such as

a memento from the parent or grandparent's early life
a lock of baby hair

NUTRITION

(Check with local kalo/taro farmers or Arboreta: Lyon on O'ahu, Ke'anae on Maui, Pacific Tropical Garden on Kaua'i to secure plantable huli so the class can grow kalo in pots or in the ground.)

7. Have the children contribute to a list of the variety of ways of using kalo based on their own experiences, e.g.:

cooked taro
laulau
lū'au with chicken or octopus/squid
kūlolo
poi
kalo chips
taro bread/muffins
etc.

8. Ask:

a. Is kalo still an important agricultural product today?

b. What is the biggest problem in raising this plant food? (scarcity of good land with flowing, cool, fresh water)

Discuss why this is so by having the children meet in mini 'ohana. Have them discuss why limited water is such a problem today and why there is a shortage of inexpensive, good agricultural land.

SOCIAL STUDIES

5. Have each group use the encyclopedia to identify a "family member" who is an honored citizen of the country. Have them write their findings on 3" x 5" cards. Have one person from each 'ohana share the information with the class.

6. Encourage the children to look in magazines and newspapers for pictures of people who help their countries in special ways. Add these to the bulletin board, identifying the country on the map.

7. Have the children identify community people in Hawai'i who contributed to the history of the community and/or the island. Consult the district resource teacher in Hawaiian Studies for a list of community resource persons who may be knowledgeable about the historical figures of the community and the island.

   See Appendix Unit II-E1, p. 151 for a sample list of names and a news article on important chiefs of O'ahu and Kaua'i.

   a. Talk about some of the holidays we celebrate in Hawai'i today in honor of great "family members" who helped Hawai'i in some way in the past.

SCIENCE/ENVIRONMENTAL EDUCATION

climate that are necessary for kalo to prosper or visit a kalo farm. Plan with the farmer ahead of time so an effort is made to involve the children in some of the steps of kalo farming.

E. Environmental Ethics

The children will learn that each individual has something which he/she gives and which he/she receives from society and the environment.

Materials needed:

8½" x 11" pictures from Nā Ki'i Ho'ona'auao Teacher's Guide showing 'ohana concepts (available in all elementary school libraries). Use pp. 1, 3, 4, 5, 6, 7, 8.

1. Have the children study the pictures and share their ideas of what is happening in the story. Record their responses on a chart.

   a. Have the children think of a person in the community who has exhibited the kind of behavior shown in the pictures.

      E.g.: caring for a baby
      loving others
      helping others

LANGUAGE ARTS

J. Planning a picture book

1. Have the children plan a picture story book using the story they created in the above lesson.

2. Work with each student in editing their stories, working on spelling, tense and word usage.

3. Plan with them the illustrations they would like to have as part of their picture storybook.

4. Plan for the illustrations to be done in art. After they are completed, the children need to rewrite their stories in finished form so that they fall in correct sequence with the illustrations done in art.

K. Biographies of well-known/important people

Table display: Set up a book display of a variety of biographies of famous Americans, explorers, Hawaiians, and other well-known/important people.

MUSIC

kapu by allowing men and women to eat together. The battle was fought at Kuamo'o on the island of Hawai'i. Locate this place on a map of Hawai'i and also Maukele which was a place name in Puna.

1. Go over the words of the song and have the children repeat them after you.

2. Tell the children that this is a hula pa'i umauma, chest slapping dance.

3. Chant the entire song using an ipu as an accompaniment.

4. See the activities suggested in the reference on p. 92. Hula motions may be created by the children or by the school kupuna.

271

ART

a hospital bracelet
the parents' wedding invitation
a special balloon or toy from a special person

a. Have the children set up their desks in a rectangular formation. Give each of them 15 minutes to plan a display of the souvenirs/mementos they brought to class.

b. Have available some multi-colored construction paper to use as a place mat.

c. Have the children share their displays, telling a little about each souvenir/memento.

d. Monitor the children as they walk around visiting each other's displays. Have them comment on the general effect of the displays.

15. Ceramics

Materials needed:

clay boards	glaze
clay	brushes

This lesson assumes that the children have had experiences with clay in the past. This lesson ties in with lesson E, p. 116 in social studies in which the children identify persons in the community who, in their estimation, are well-known or outstanding.

NUTRITION

9. See Appendix Unit II-J, p. 157 for a sketch of O'ahu depicting some natural resources of O'ahu.

   a. Run off copies for the children.

   b. Have the children read the sketch for information and chart the kinds of information they find dealing with natural resources.

   c. Say:

      If you were a Polynesian discovering this new island, where would you choose to live? Why?

      What would you use for food?

10. The inquiry above could lead to a study of seafoods. Read the legend "The Empty Sea" from Thompson, Hawaiian Tales of Heroes and Champions. See Appendix Unit II-K, p. 158 for a summary of the legend.

11. Ask:

    a. Which fish and sea creatures were mentioned in the legend?

    b. Are you familiar with their names?

    c. Do you think people still like to eat these fish today? Are they still caught for food today?

272

SOCIAL STUDIES

E.g.: Kamehameha Day
Kūhiō Day

See Appendix Unit II-E, pp. 149-150 for pictures of these two leaders.

b. Have the children share what they know about these two leaders. Some readily available books on these two men are:

Day, Grove. Kamehameha

Holt, John. Monarch in Hawai'i

Kamae, Lori. The Empty Throne (Kūhiō)

Mellen, Kathleen. Hawaiian Heritage

Mellen, Kathleen. The Lonely Warrior (Kamehameha)

c. Encourage the children to go to the library to find out more about these two men.

d. Set up two bulletin boards, one for each of the men. As the children discover more facts about these honorable men, have them add them to

273

SCIENCE/ENVIRONMENTAL EDUCATION

b. Have them draw a picture of how they feel about the person. Have them share their pictures and tell everyone about their special community person.

c. Mount their pictures on the bulletin board as they share about their special person. When everyone is done, place the word "Responsibility" in bold letters on the top of the bulletin board.

d. Ask the children:

1) What does responsibility mean to you?

2) How do you show your responsibility at school? at home? in the community?

3) Why is it important to learn responsibility?

4) Can you be a contributing member of your community if you do not have a sense of responsibility?

5) What is the Hawaiian word for responsibility? (kuleana) Add this word to the bulletin board and display the 17" x 22" chart on Kuleana from the Nā Ki'i Ho'ona'auao collection.

LANGUAGE ARTS

1. Talk about biographies and what they are.

2. Introduce the children to the biographies. Have them state how these books differ from stories like Clifford, The Big Red Dog.

3. Read Princess Ka'iulani by Helen Hoyt.

a. Discuss some of the historical facts brought out in the story. Write them on a chart.

b. Have the children analyze the facts and then determine the contribution Princess Ka'iulani made to Hawai'i's history. Each student may have a different opinion. Accept what they say and then talk about the "Greatest" contribution.

c. Have the children locate:

Ka'iulani's home, 'Āinahau
St. Andrew's Cathedral
Kawaiaha'o Church
Mauna 'Ala (Royal Mausoleum)

274

MUSIC	ART	NUTRITION
	a. Have the children identify people in the community, immediate or at large, who have impressed them either in music, government, education, art, sports or in any other field. b. After talking about these people, have the children each select one person he/she would like to remember as being the most special. c. Have them each mold a figure of this favorite person in action. E.g., if the child selects a famous surfer, the figure should be molded to show a surfer in action. d. Conduct a lesson on glazing colors that compliment the profession. E.g., the surfer would not be black but perhaps a brown or a blue. e. Set up a display of all the figurines. Have the children share their experiences in this project. f. Encourage each student to write a paragraph on a 3" x 5" card describing his/her famous person, and place each card with the correct figurine.	12. Survey Make a list of fish and other seafoods the early Hawaiians may have caught and eaten. Have students ask their family members or neighbors the following questions. a. What fish do you eat today? b. What fish are caught in Hawaiian waters? c. What fish are available in the markets today? d. Do we have as much seafood today as the Hawaiians had many years ago? Why or why not? List the reasons why there has been a drop in the amount of seafood. Resources: Colorful Hawaiian Fish, Boom Books, Box 1922, Hilo, Hawai'i, 96720 ($1.75) Titcomb. Native Use of Fish in Hawai'i. 13. Field trip Arrange a field trip to a seafood market. Have students look for items on their list and ask the salespersons if they were caught in Hawaiian waters.

SOCIAL STUDIES	SCIENCE/ENVIRONMENTAL EDUCATION	LANGUAGE ARTS

the bulletin board. Encourage them to talk to their parents and to community resource people. The children should actively participate in the collection of data on figures and events in the community that have had an impact on community life and expand that quest to the entire island.

e. Have the children find the approximate dates of these men's birthdays and add them to the collection of data.

f. Plan some kind of honor program for these men during the school year and have the children share the information they found with the rest of the school.

g. This same type of activity could be carried out for other important personnages whose names have been used for schools in the community such as Lili'uokalani, Mayor Wilson, Sgt. Solomon, August Ahrens, Blanche Pope, Benjamin Parker, Chiefess Kapi'olani, Ernest de Silva, King Kamehameha III and Elsie Hart Wilcox. See Appendix Unit II-E, p. 151, for a sample list of names.

e. Have the students read the newspapers and look for articles or pictures of community people displaying responsibility. Encourage them to be aware of community people who do exhibit responsibility and thank them for taking care of their kuleana.

E.g.: A girl picking up someone else's candy wrapper.

A boy taking time to walk to a rubbish bin to get rid of an empty water cup.

2. Have the children think about a community job they would like to have that will allow them to be remembered fifty years later as an outstanding "contributing" member of the community.

a. Prepare a worksheet similar to the one below.

My Future Contribution

Occupation:
Preparation:
Skills needed:
Job description:
Reasons for my success:

Pictures of these historical places are available in Feher's Hawaii: A Pictorial History.

d. Motivate the children to select an incident in the life of Ka'iulani that made them happy and one that made them sad.

e. Ask the children to infer their own reasons why Princess Ka'iulani died so young.

4. Fill out a genealogy sheet for Princess Ka'iulani, tracing her lineage back through the Kalākaua line. See Appendix Unit II-R, p. 174.

5. Have the children do a genealogy chart for themselves, tracing their lineage back to their grandparent generation. See Appendix Unit II-S, p. 175 for a genealogy chart.

6. Stimulate a discussion of what kinds of activities the children's grandparents and/or parents have engaged in that are of significance to the 'ohana. Have the children talk to their kūpuna (grandparents) about their past,

MUSIC

ART

16. Mural

Materials needed:
collage materials
tempera paint
brushes
butcher/wrapping/Kraft paper, 36" x 48"

Procedure:

a. After the children have had some time to brainstorm their "Hawai'i 50 Years in the Future" (see language arts lesson L, p. 128), have them do the actual painting and application of collage materials in art class to create a mural.

b. Encourage the use of a variety of materials. Have the children combine materials and experiment with gluing one on top of another to see the effect.

c. Evaluate the experience. Encourage the children to share their discoveries.

NUTRITION

14. Resource speakers suggested

a. A speaker from a wholesale seafood distribution company to talk about Hawaiian seafood products and imports.

b. Invite a commercial fisher to speak about the different types of fish he/she catches.

c. Invite a kupuna or parent to show the students how to prepare a fish or to share a Hawaiian seafood he/she has prepared, talking about its preparation.

d. Contact catering services who may have a speaker who can share a Hawaiian food dish with the students.

e. Suggest that children watch the weekly fishing program, "Let's Go Fishing," on Sunday afternoons for coverage of fishing in local waters, interesting cultural sidelights dealing with fishing and seafood, and preparation of various types of seafood and fresh water food.

f. Invite parents of various ethnic backgrounds to demonstrate the preparation of a seafood of their own culture. E.g.:

Japanese - ogo or food wrapped in nori
Chinese - steamed mullet or sweet-sour shrimp
Filipino - sinigang na isda/hipon (boiled dish with fish/shrimp, tomatoes, tamarind, garlic, kamaias and young leaves of kamole [sweet potato])

SOCIAL STUDIES

F. Hawai'i in the future

1. Show the children some pictures of Hawai'i as it looked a hundred or more years ago, fifty years ago and then today. Use Feher, Joseph, Hawaii'i: A Pictorial History or any other pictorial resource such as:

   Cameron. Above Hawai'i
   Scott. The Saga of the Sandwich Isles

2. Have the children study the pictures and note the changes that they see in the pictures. Ask:

   a. What kinds of changes do you see?

      E.g.: Buildings are different.
      Flora has changed, different plants and trees.
      More crowded, more houses, more people, etc.

   b. How did these changes occur? (humans' effects on the environment, technology, erosion and volcanic action, etc.)

   c. What will our island be like 50 years in the future?

281

SCIENCE/ENVIRONMENTAL EDUCATION

   b. Have each student work on this worksheet with their parents as possible resources. Encourage them to interview community people to get information on real life career experiences.

   c. Help the children do some research in books such as encyclopedias and non-fiction books.

   d. Have the children draw a series of pictures showing themselves twenty years later performing their job.

   e. Set up a performance area and have the children present their reports.

   f. Have the children name their "outstanding" community persons (career role models) and compose a bulletin board on which their names and/or pictures may be mounted for everyone to see.

F. Future Environments

The children will understand that if people take care of the earth it will continue to meet the needs of all living things in the future.

LANGUAGE ARTS

about the interesting things they've done or heroic or unusual escapades. Perhaps a tape of these sessions may be shared. Or, these special talks may be written up and shared.

7. Read another biography to the children from one of the following resources:

   Day, Grove. Kamehameha.

   Mellen, Kathleen. Hawaiian Heritage.

   Mrantz, Maxine. Women of Old Hawai'i.

   Rizzuto, Shirley. Hawai'i's Pathfinders.

   The selections vary from kings and queens to well known personalities still living today.

8. Talk to the children about Kamehameha I who united the islands. Read them the story of his boyhood from the reference by Day listed above, pp. 5-6. Share excerpts of his life as an ali'i. (See social studies activity #7, pp. 120-124.)

282

Continued on the next page...

SOCIAL STUDIES

d. Allow the children to meet in mini 'ohana to discuss this and to plan Hawai'i 50 years from now.

e. Give each 'ohana a large sheet of chart paper on which to draw their future projections. Encourage them to plan their sketches and to get input from everyone in their group. Remind them about the 'ohana concepts.

Culmination:

Have each mini 'ohana present their Future Hawai'i to the class using the narrations they wrote in language arts. Encourage them to dress the part too by using costumes they created.

SCIENCE/ENVIRONMENTAL EDUCATION

1. Prepare a chart similar to the one below:

Needs	Actions	Results	Cures
Homes	cut down trees	erosion	plant trees
Food	plowed more land		
Trans-porta-tion			
Recrea-tion			

a. Conduct inquiry using this chart. Allow the children to work in mini 'ohana so they have more of an opportunity to brainstorm.

b. Work with each 'ohana to motivate thinking processes. Encourage the children to analyze the environmental problems in the community such as:

pollution
noise
litter
overcrowding
energy shortages
droughts
depletion of ocean food resources

LANGUAGE ARTS

Ask:

a. How do we remember this great Ali'i today? (Kamehameha Day Parade, Kamehameha Day celebration, decorate his statue, etc.)

b. Name all the things you know that are called Kamehameha. (highway, school on O'ahu, books, parade, day, songs)

c. If you were a king or a queen today, what kinds of changes would you make in our community?

9. Creative Writing

Motivate the children to write a poem "If I Were the Ali'i." They may choose to write the poem in a modern day context or in the context of the monarchy days.

10. Speaking

a. Have the children share their poems with the class.

Continued on the next page...

SCIENCE/ENVIRONMENTAL EDUCATION

c. After working in mini 'ohana for part of the class period, have the 'ohana share their thoughts and write them on the class retrieval chart.

2. There are several films available to teachers that address some of these environmental issues. See TAC Guidelines and Video Holdings List, RS 81-2093, OIS, 1982, p. 184. Some of the titles are:

   a. 0772-2 Who Will Save the World from Man?

   b. 0772-3 Populations

   c. 1080-3 Pollution Solution

   d. 1079-2 Clean Air is a Breeze

Evaluation

1. Have the children study the retrieval chart. Help them to see trends and then results.

2. Ask:

   a. How can we do more to help cure and protect our environment?

   b. What future projects can we undertake?

LANGUAGE ARTS

b. Encourage them to practice with a partner so that they have parts of it memorized for better oral presentation.

c. Have them compose a title and then say the title before sharing the poem. Work on oral speaking techniques and good listening techniques before the actual "Poetry Hour."

d. As the poems are shared, encourage the children to create an imagery of themselves as the ali'i.

Evaluation:

Encourage the children to share what they think life was like under the chiefs of early Hawai'i. If they were given a choice, would they choose to live in today's world or in the world of an earlier Hawai'i? Why? or Why not?

L. Narratives of Hawai'i 50 years in the Future

(This lesson goes hand-in-hand with that presented in social studies lesson F.2.e., p. 127)

LANGUAGE ARTS

1. Having done the sketches of "Future Hawai'i" in social studies, have the children now prepare a narration for their sketches cooperatively as a mini 'ohana.

2. Coach them on expressive writing, the use of colorful descriptive language and the use of figurative language.

3. Work with them on editing skills. Encourage them to kōkua and laulima so that everyone has input.

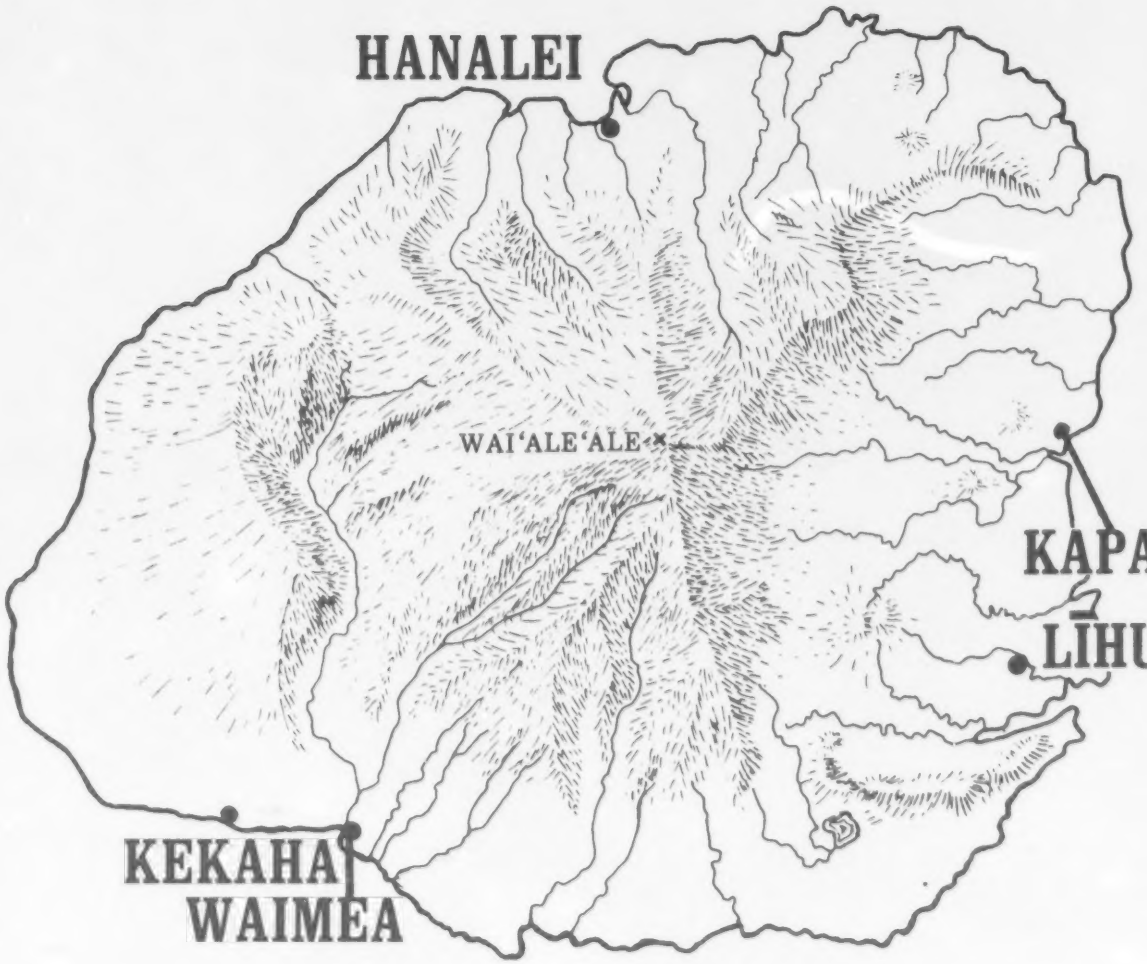
4. Have them turn in a finished copy of their narration that can be mounted on the bulletin board with their sketches.

NI‘IHAU

WAIHO‘OLU‘U - KE‘OKE‘O
LEI PŪPŪ

129

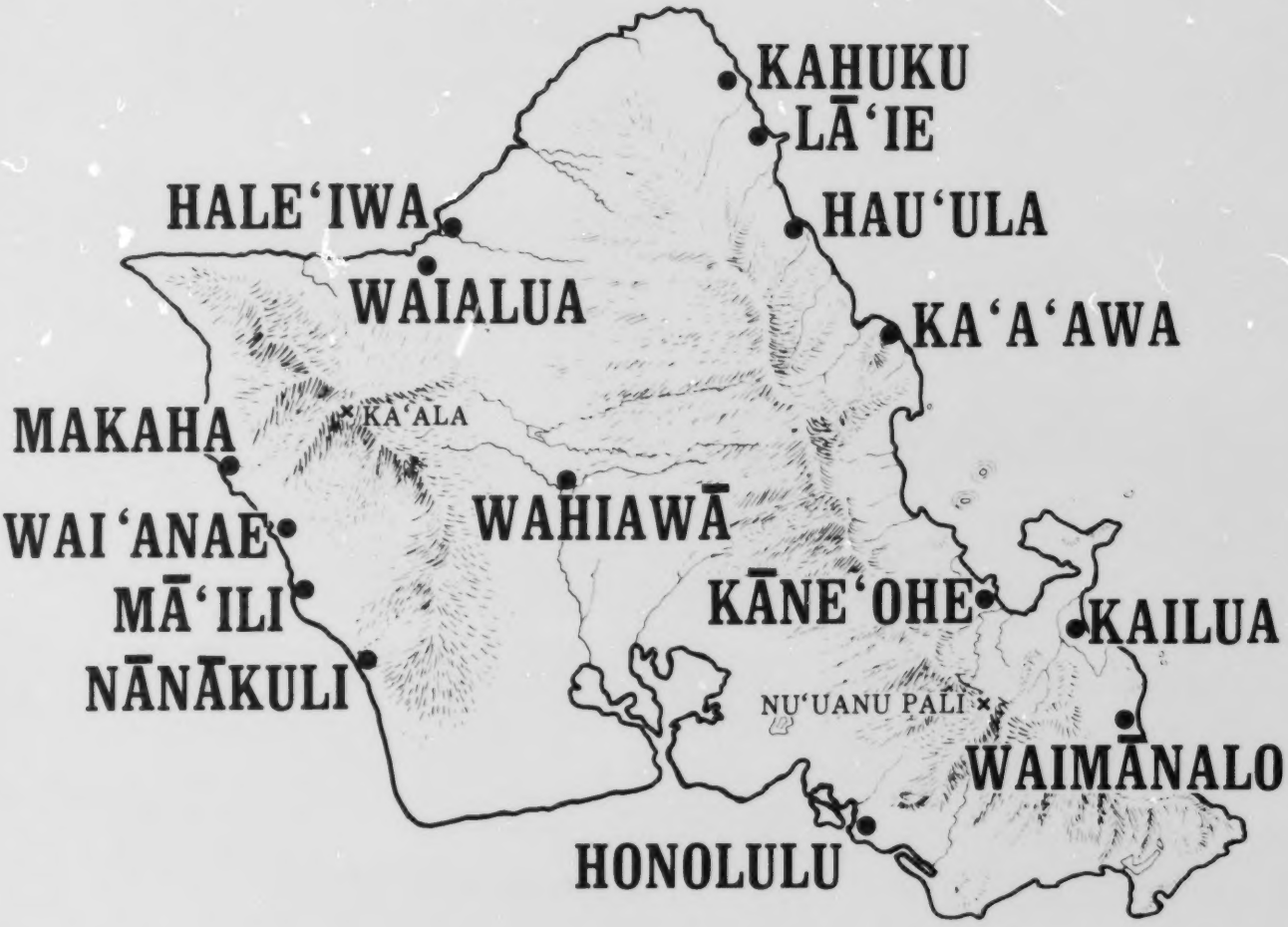
KAUA‘I



130

WAIHO‘OLU‘U - PONI
LEI MOKIHANA

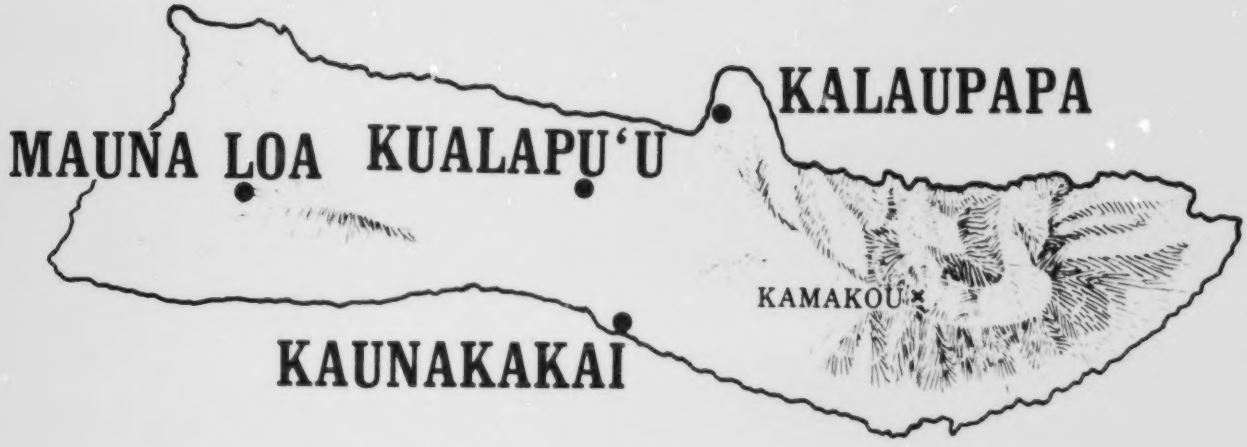
O‘AHU



WAIHO‘OLU‘U - MELEMELE
LEI ‘ILIMA

131

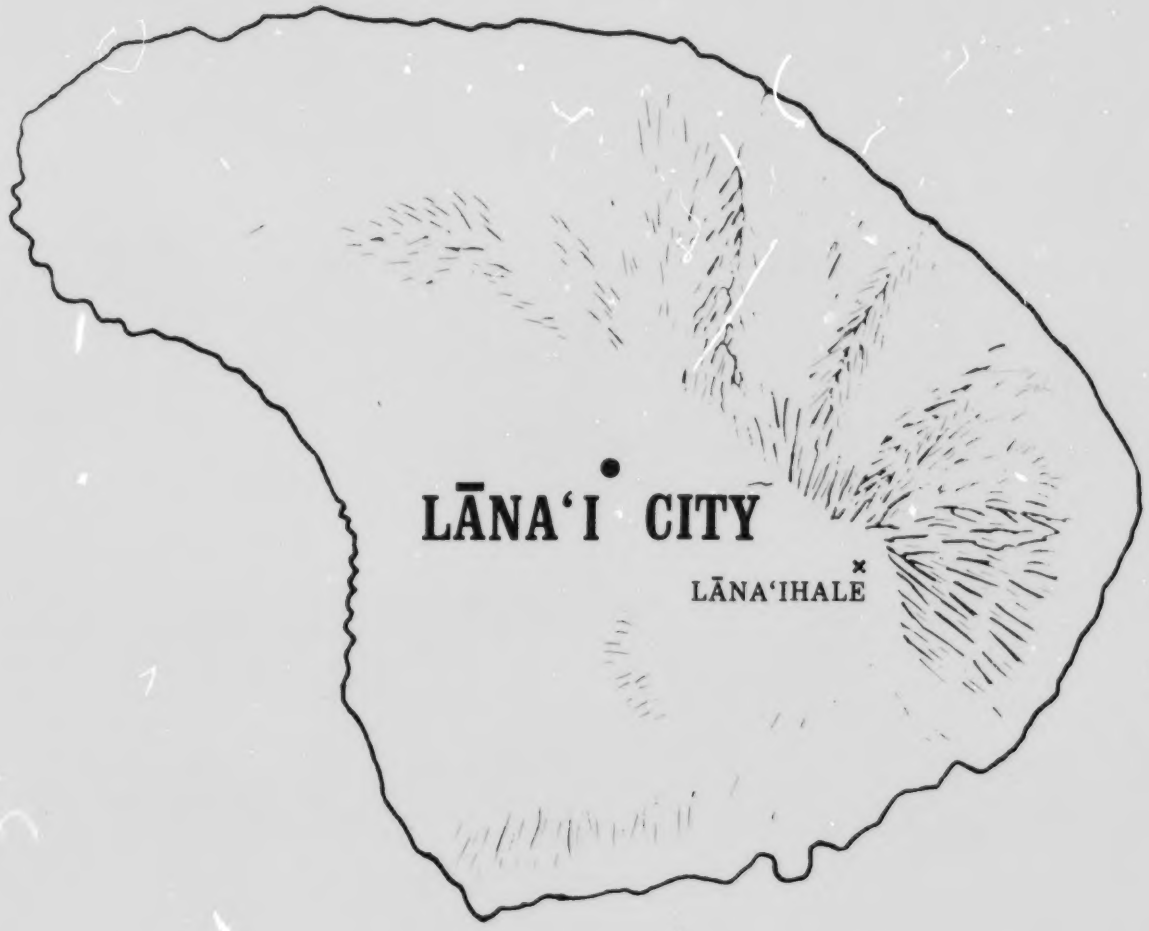
MOLOKA‘I



132

WAIHO‘OLU‘U - ‘ŌMA‘OMA‘O
LEI KUKUI

LĀNA‘I



WAIHO‘OLU‘U - ‘ALANI
LEI KAUNA‘OA

MAUI

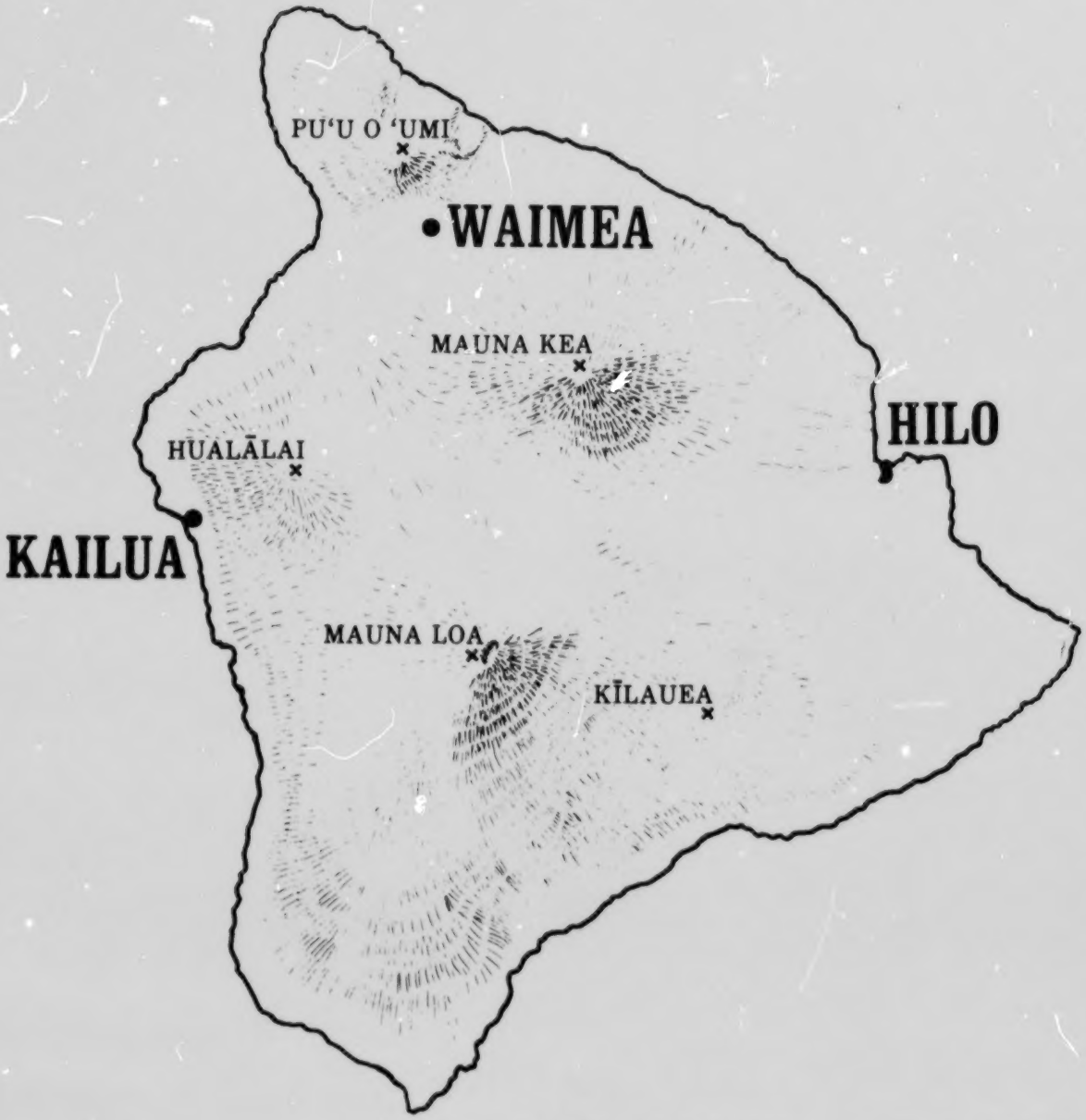
134

WAIHO'OLU'U - 'ĀKALA
LEI LOKELANI

KAHO‘OLAWE

WAIHO‘OLU‘U - HINAHINA
LEI HINAHINA

HAWAI‘I



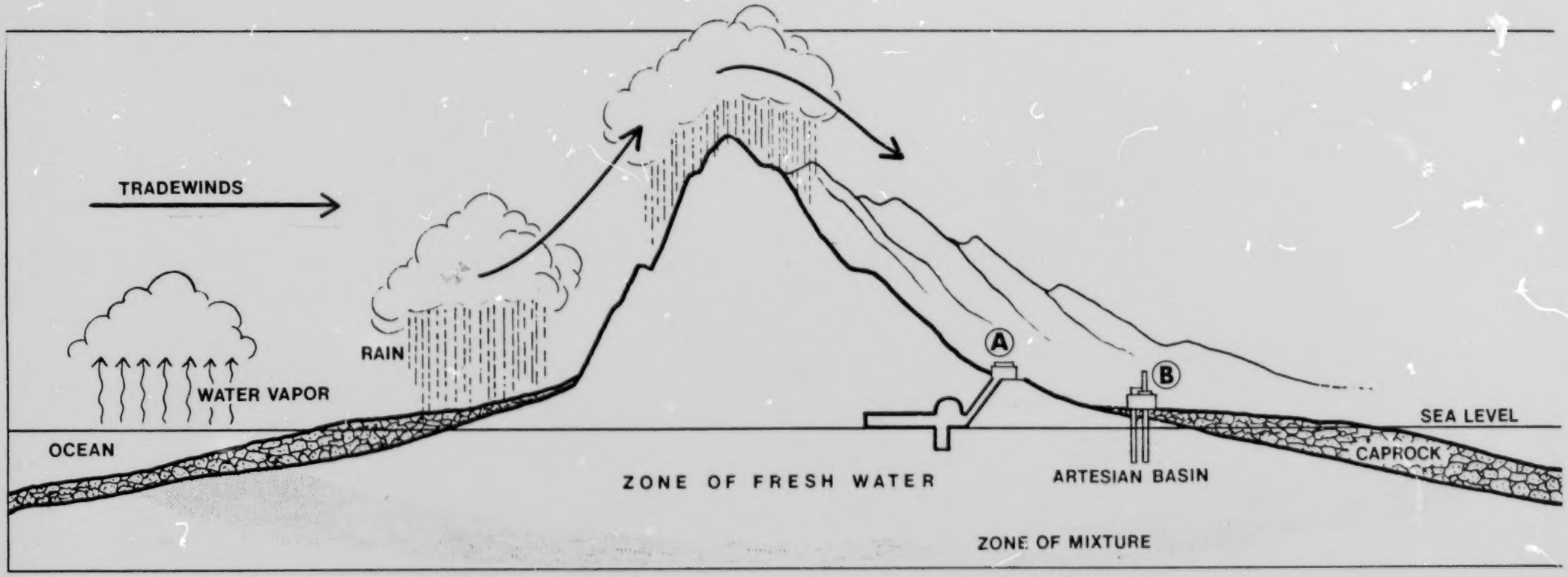
WAIHO‘OLU‘U - ‘ULA‘ULA
LEI LEHUA

136

Worksheet: Original Sources

Many products that we use in our daily lives are processed from original sources such as plants or animals, the earth/land and the sea. Use this worksheet to trace a product through its processing back to its original source. After working on these products, students should become more aware of the origins of the various products they see around them.

Item		Original Source
Paper Bag Hula skirt (hau or rafia) Canned Pineapple Koa bowl	→ Supermarket → Paper Bag Company → Lumber Supply Company → Tree Cutting Company → Tree Cutter → forest → tree → seed	mea kanu (plant)
Red cinders for the garden Olivine pendant Ceramic ware		'āina (land)
Turtle shell bracelet Coral ring Canned tuna		kai (sea)
Leather shoes Woolen sweater Boar-hair brush		holoholona (animal)



This sketch shows the origin of Hawaii's excellent drinking water. Moisture from the ocean is driven up against the mountains, where it rises, cools, condenses and falls as rain. (A) marks a slanted tunnel, such as the Halawa Shaft, to collect water that has infiltrated into the ground. (B) marks an artesian well, drilled through the caprock, to tap water in the basal lens. Beneath the zone of fresh water is a zone of mixture, between fresh and salt water. —Star-Bulletin sketch by Ray Higuchi.

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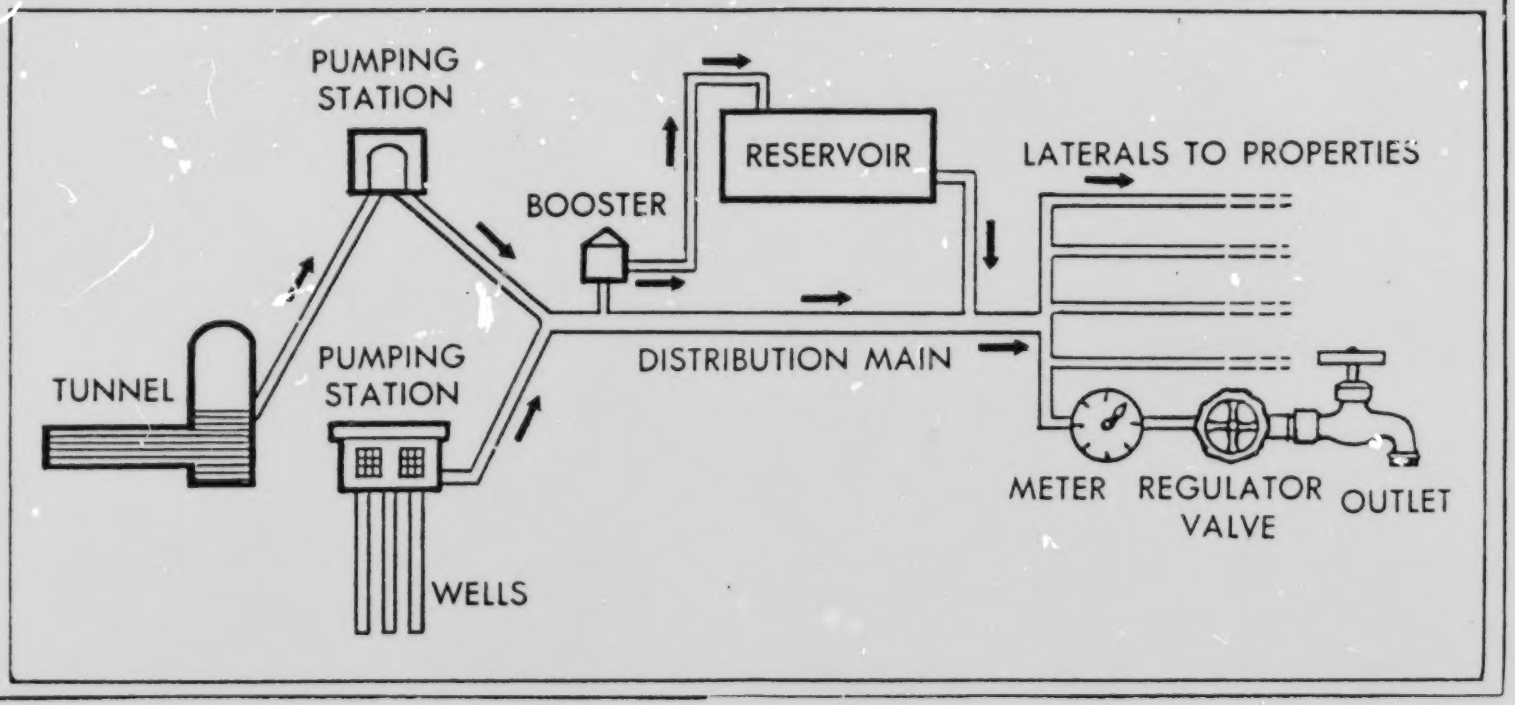
From the Well to the Tap

This chart shows the flow of ground water from either wells or tunnel to the consumer's faucet. It goes directly into the reservoir if the source is close to the reservoir. If the source is distant from the reservoir, it goes into the distribution main, with the excess going into the reservoir. During peak periods, when about three times as much water is being used as during an average period, both reservoir and water source contribute to the main. — Star-Bulletin diagram by Ray Higuchi.



299

300

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Rain brings Waimea some relief

HILO — The Big Island had its first big rain in months Monday night, but it merely gave officials some breathing room in the fight against a prolonged drought, Civil Defense Administrator Harry Kim declared yesterday.

"It's just a break for us . . . the drought is not over. We've been given some additional time to get organized."

More than an inch of rain fell Monday night from Hilo to North Kohala, giving welcome relief to parched pastures and empty catchment tanks.

The county's two 50-million-gallon reservoirs at Waikoloa Stream above Waimea began to gain instead of lose. By yesterday afternoon, William Sewake, manager of the water supply department, said the reservoirs had 18 million gallons in storage. They had just 9 million on July 15.

Despite the gain, mandatory restrictions that took effect Monday with daily monitoring of Waimea's 1,400 water meters are continuing.

"We'll see how much this pours into our system overnight," said Sewake, hopeful of ending the costly monitoring program and returning to voluntary conservation.

Waimea consumers, reluctant at first to reduce consumption, had cut their daily draw to 800,000 gallons by Monday — compared with an average use of 1.3 million gallons.

However, this figure does not include vegetable farmers — whose agricultural reservoirs had gone virtually dry until Monday's storm.

Kim, afraid that the rainstorm was a fluke, said all of the pumps necessary to to pump 600,000 gallons of water from Lalamilo well, below Waimea, into the residential area have been secured.

Under his timetable, the pumps and piping should be installed by Aug. 5 and operating no later than Aug. 10.

Removal of emergency pipes from the private Waikoloa Village well, which had been easing part of the drought, was well under way. The Waikoloa Village source is no longer needed now that Lalamilo is sending water to Kawaihae and other coastal areas of South Kohala.

The pipe is being rushed from Waikoloa Village to the Kohala Mountains to continue a line already started from a million-gallon-a-day spring source discovered earlier this year.

County and state officials hope to have the spring source fed into a line all the way to the Waikoloa Stream reservoirs, saving 200,000 gallons a day in evaporation.

Kim said the piping is expected to completed later this month.

At Hawaii Preparatory Academy, a private school in Waimea, authorities may be contending for first place in the conservation sweepstakes.

Through a series of moves aimed at cutting water use, the school is using between 20 and 50 percent of the water it normally requires.

Headmaster Ronald Tooman said the cafeteria dishwasher has been turned off and only paper plates are being used for meals.

The gymnasium showers have been turned off. Most fountains have been shut down. Students involved in summer programs are restricted to two-minute showers. "We are encouraging people to shower with a friend," said Tooman.

"About the only water we are permitting staff and students to use is for cooking and drinking," Tooman added.

Is there enough water? Yes, if...

By Jim Borg
Advertiser Staff Writer

Is there enough water on Oahu?

Some of Hawaii's top experts on water supply met last night in a public forum to discuss that question — and the answer was Yes, if . . . .

Current estimates are that without conservation, the Pearl Harbor basin will run out of fresh water by the year 2000, said Robert Chuck, manager and chief engineer of the division of water and land development in the state's Department of Land and Natural Resources.

However, with proper conservation, he said, there can be plenty of water.

If all of Oahu's water resources were tapped, furthermore, there would be another 100 million gallons available daily, Chuck said. But he warned that tapping every potential drop would be an impractical if not impossible task.

Meanwhile, Gov. George Ariyoshi today is expected to announce that a new well in Wailupe will provide about 600,000 extra gallons daily. The state hopes that more such wells can be drilled in Manoa and other areas.

About 70 persons attended the meeting last night at Waipahu High School — fitting because Waipahu residents have been asked by the state to conserve water voluntarily due to shortages. The meeting was sponsored by Leeward Community College's Science for Citizens project.

The Pearl Harbor water table is the most threatened of Oahu's water supplies. The state has set a daily limit of 225 million gallons — the so-called "sustainable yield" — that can be pumped from the basin.

According to Chuck, 115 million gallons are used by Oahu Sugar Co., 77 million are used by the Honolulu Board of Water Supply, another 25 million are used by the military and the remaining 8 million go to private users.

Chuck said that 70 years ago, a typical well in the Pearl Harbor basin registered at 25 feet above sea level — meaning there was another 1,000 feet of fresh water below before the table turned brackish. Today, he said, that same well registers less than 15 feet — indicating only 600 feet of fresh water, or a loss of 400 feet.

Charles Farr, Oahu Sugar Co. civil engineer, said that only about 16 percent of the water the plantation uses would be fit to drink. For the year 1979, for instance, that translated to 19.44 million gallons out of the company's average daily water use of 122.94 gallons, he said. (Sugar cane doesn't mind certain levels of brackish water.)

In order to make better use of its water, Oahu Sugar Co. plans to convert more than 13,500 of its 18,240 acres to drip irrigation by 1984, Farr said. Drip irrigation allows far less water loss by evaporation than does trough irrigation, Farr said.

But that doesn't mean there will be more water available for domestic use. In a drip system, the cane uses more water.

More than 10,000 acres will be drip-irrigated by the end of the year, he said.

Farr also said the company was in the final stages of enclosing 4,500 acres of Ewa fields into a close water system where water is carried directly from the well to the plant underground. That system will be expanded and computerized, he said.

These improvements will cost $14 million, he added.

In a subtle assault on the water-hungry sugar concerns, Williamson Chang, an associate law professor at the University of Hawaii, said "what we need to survive the year 2000 is a shift in the idea of private property."

Borrowing Buckminster Fuller's concept of "Spaceship Earth," Chang said water resources should become public property as demands in Hawaii increase.

Kazu Hayashida, manager and chief engineer of the Honolulu Board of Water Supply, said the city government has tried to enhance the supply of water by a number of measures, including a controversial push for the preservation of watershed lands.

Garden Island watered

LIHUE — Kauai's water shortage, if not over, has been alleviated by substantial rains during mid-July.

The National Weather Service earlier reported that rainfall for the first six months of 1981 was about half the average. Sugar companies said reservoirs were nearly empty and unirrigated cane fields suffered from "moisture stress."

The average rainfall for July at Lihue Airport, which is drier than many part of Kauai, is 1.87 inches. But total rainfall through yesterday was already 2.93 inches at the airport, the weather service said.

The weather for most of the past week on Kauai has been wet.

Both Faye and McBryde Sugar Co. Manager Richard Cameron said that they'd had "good water" and that the pressure was off the cane operations.

Cameron said McBryde's reservoirs, which had been near empty, are now up just above the average water level due to last week's rains.

County officials earlier said domestic water supplies had not been affected by the dry weather. 7/22/81

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2. Appendix Unit II-C

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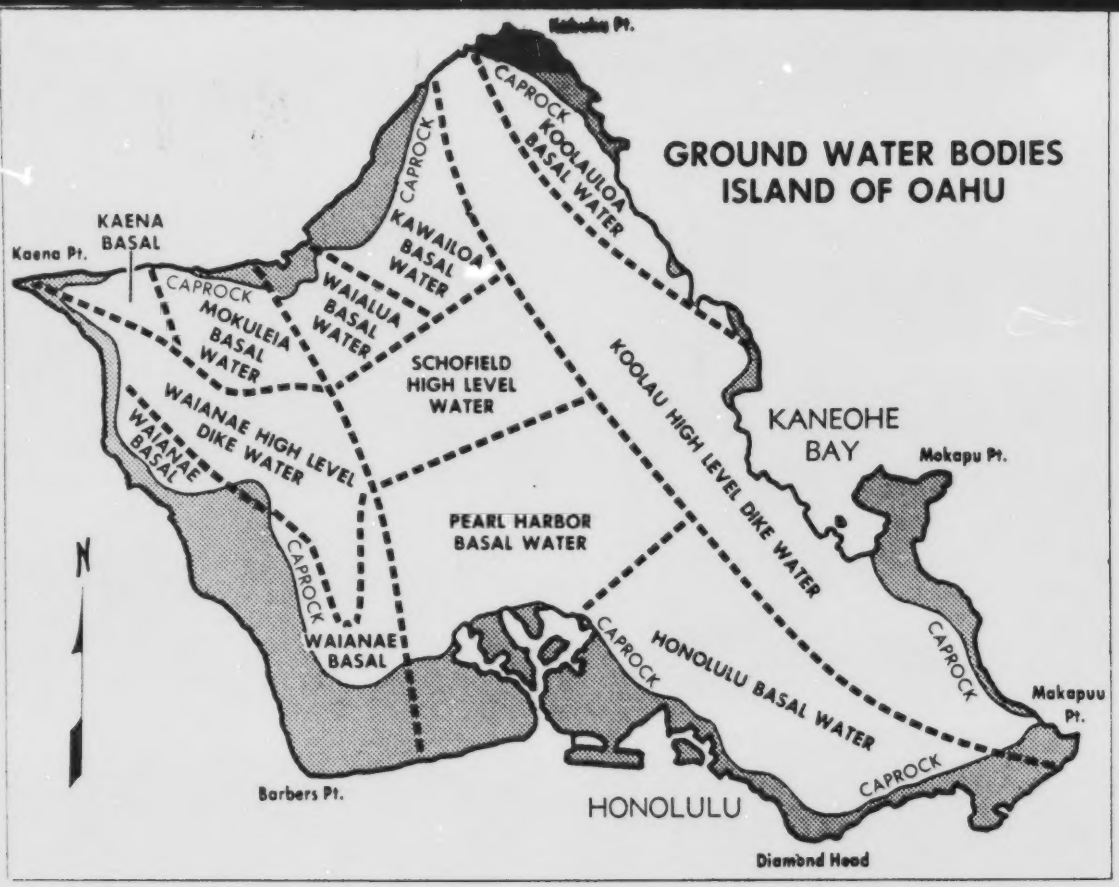
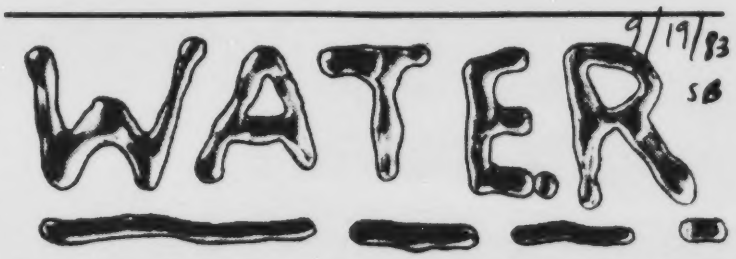


Islands' Most Basic Blessing: Plentiful Supplies of Water

By Harry Whitten
Star-Bulletin Writer



FEW places in the world can claim to have as good water as Hawaii's. This fortunate situation is the result first of geology and secondly of generally wise development and management.

The history of Hawaii's water, however, is a history of scarcity followed by plenty, of problems that were resolved only to be followed by new ones.

With the year 2000 only 17 years away, Hawaii's people find problems not of crisis dimension, but with a need for planning to prevent a crisis.

This is the first article in a series telling about Hawaii's water, about the history of development and use, the agencies involved, the legal issues, how water affects agriculture and development, the dangers of contamination and what is being done by researchers and administrators to assure that there will be adequate supplies for Hawaii's needs when the year 2000 and succeeding years roll around.

Hydrologists estimate that the limit of developable ground water on Oahu will be reached by the year 2000. The Neighbor Islands still have reserves.

The Hawaiian word for water is "wai." Place names are indicative of the importance of water: Waikiki, Waipahu, Waimanalo, Waianae, Waialua, Kawaiahao, and so on. The double form of the word — "waiwai" — means prosperity or wealth.

WHAT'S THE origin of Hawaii's water?

First, it must be realized that fresh water, the kind essential to life, forms only a small fraction — 0.7 percent — of all the water in the world. The oceans contain 97 percent of the world's water, while 2.3 percent is brackish or frozen, such as in polar ice caps.

Hawaii's fresh water is the result of rain. There is a constant movement of moisture from water surfaces to the atmosphere and back to the Earth. During this process, impurities are removed and the water again becomes suitable for consumption by living creatures, including man.

If it were not for the moun-

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Grade 2, Appendix Unit II-C

Water Science Has a Special Language

WATER, like all other subjects, has a number of special terms used commonly by professionals, less frequently by laymen.

Here are some of them:

AQUIFER: An underground body of rock or similar material capable of storing water and transmitting it to wells or springs.

ARTESIAN: Water contained under pressure beneath caprock.

BASAL LENS: The fresh water that floats on sea water under much of the southern and northern portions of Oahu.

DEPLETION: Water withdrawal from surface or ground water reservoirs at a rate greater than the rate of replenishment.

DIKE-CONFINED WATER: Ground water, which is impeded in its flow toward the ocean by underground barriers of dense rock, or dikes, formed when molten rock was forced into volcanic rifts.

DRAFT: Water pumped forcibly from within the aquifer. The definition excludes ground water that is freely discharging, such as springs.

EVAPOTRANSPIRATION: Water dissipated to the atmosphere.

GHYBEN-HERZBERG LENS: Named for the two Dutchmen who independently discovered the phenomenon. The rule is that for each foot of fresh water above sea level, the fresh water extends 40 feet below. An allowance must be made for a zone of mixing with the salt water.

GROUND WATER: Water that occurs beneath the land surface and completely fills all pore spaces of the rock material in which it occurs. It is the largest single source of fresh water.

HEAD: Level of the ground water above mean sea level.

HYDROLOGIC CYCLE: The circulation of water from the sea, through the atmosphere, to the land and thence (with many delays) back to the sea by overland and subterranean routes, or directly back into the atmosphere by evaporation and transpiration.

NON-POINT SOURCE: A source of diffuse waste discharged into a water body, such as sediment and certain agricultural chemicals, which cannot be located specifically.

PERCHED WATER: Ground water held up at high level by an impervious layer of rock.

POINT SOURCE: A specific source from which waste water is discharged into a water body, such as effluent from a municipal sewer system or outflow from an industrial plant.

RECHARGE: That rainfall which infiltrates the Earth and replenishes ground water bodies.

SUSTAINED YIELD: The quantity of water that can be withdrawn annually from ground water aquifers, during a period of years, without depleting the available supply.

WATERSHED: A geographic area from which water drains into a particular water body.

WATER TABLE: The upper level of an underground water body.

Thanks to Geology, Good Management

SB 9/19/83

Plenty of Cool, Clear Water

Continued from Page One

tains, the Islands would be barren. Most of the rainfall in windward areas results from cooling of the moisture-laden trade winds as they rise up the mountain slopes. The winter storms and southerly "kona storms" cause most of the annual rainfall in leeward areas.

The rain may be lost through evaporation, or may be used by plants, may run off in streams and ditches, or may infiltrate into the ground. It is the rain that seeps into the ground that is of most importance to Hawaii.

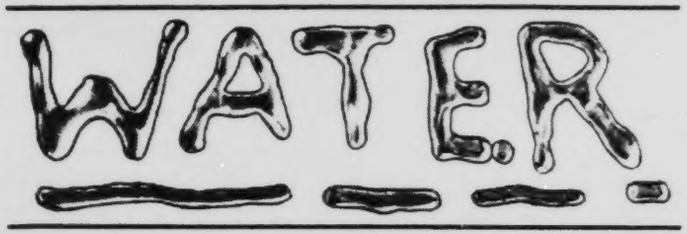
Hawaii's geography is such that wide variations in rainfall occur within relatively short distances, with differences of 100 inches within three miles not unusual.

THE HAWAIIANS, for the 1,000 years they were here before Westerners arrived, and other peoples, for the 100 years after Capt. James Cook's arrival, depended on surface water, plentiful in some places, scarce in others.

The Hawaiians started water development by damming streams, digging ditches and diverting water for the irrigation of wetland taro.

With the changes that occurred after the arrival of Westerners, an inadequate water supply became a problem. Hooved animals damaged the mountain watershed. Mountains were stripped of trees, the streams flooded and later went dry.

The situation changed rapidly after 1879, when James Ashley drilled the first artesian well near Honouliuli for James Campbell. This major event encouraged drilling of more than 430 wells on Oahu by 1910. It made possible the development of sugar plantations, which rapidly became a dominant factor in the economy.



Sugar takes a lot of water — about a million gallons for every 100 acres of cane.

Even before the discovery of artesian water, ditch systems had been started to irrigate sugar cane. The first such ditch is reported to have been built on Kauai in 1856, a ditch some 11 miles in length. Large-scale development came with the completion in 1878 of the "Old Hamakua Ditch" on the rugged slopes of Maui's Haleakala.

WHAT WITH BOTH surface and ground water for agriculture and ground water for domestic use, Oahu entered into a period of abundance. But water was wasted, a growing population required more, and the water table dropped. There were a series of alarms and scandals until the Honolulu Board of Water Supply, an autonomous agency, started operation in 1929 and under the able leadership of its first manager, Fred Ohrt, brought things under control.

Leaky wells were cased, meters were installed to discourage waste and the mountain watersheds were protected. In 1959 the Suburban Water System also was brought under the wings of the Board of Water Supply, resulting in a unified system for the entire island.

The unified system has been praised as efficient and its directors given credit for foresight. In comparison to the water supply situation in many cities, there is no doubt Honolulu's is superior, for which fortunate geology as well as good management must be credited.

It might be well to look at that geology.

Charles Ewart, hydrologist project chief with the water resources division, U.S. Geological Survey, says that Oahu, with only 605 square miles, has a ground water system equal to that of Mainland aquifers in complexity and is more complex than many.

EWART IS DIRECTING a four-year study of Oahu's ground water system. Ten subsystems have been identified and they are all interrelated.

There are eight basal water bodies. Basal water is that body of fresh water standing over sea level that floats on the heavier sea water. The fresh water forms a lens that floats on sea water and saturates the rocks to some depth below sea level.

The lens has been referred to as a Ghyben-Herzberg lens, named for the two Dutchmen who separately discovered the phenomenon. The rule is that for each foot of fresh water above sea level, the fresh water extends 40 feet below. An allowance must be made for a zone of mixing with the sea water.

When basal water is contained beneath a caprock, as it is around the Pearl Harbor Basin, it is called artesian water.

There are also dike-impounded water systems, such as those found in the Koolau and Waianae mountains. Dikes consist of nearly vertical slabs of dense, massive rock and are impermeable. Oahu also has perched water, so-called because it is held up on impervious strata. It is of comparatively small importance, but sometimes issues forth as springs.

THE BOARD OF Water Supply, for management purposes, has seven water use districts: Honolulu, Windward, Waialua-Kahuku, Wahiawa, Waianae, Ewa and Pearl Harbor.

Forests also have an important relation to water supply, but the relation is complicated. In some places fog caught by trees increases drip under trees and thus adds to the water supply. Forest vegetation is a superior vegetation for promoting infiltration of water into the soil. Forests can help minimize flooding and prevent erosion.

While attempts have been made during the years to promote a timber industry in Hawaii, most researchers have regarded water as the most important product of Hawaii's forests.

Gross water use in the entire state in 1980 amounted to 630 billion gallons, equivalent to 1.72 billion gallons per day. The 1980 figures show the following percentages for class of water use in the state: agriculture, 65; domestic (including municipal and military), 12; hydroelectric, 12; industrial, 10; and commercial 1.

Surface water diverted from streams on Kauai, Maui and the Big Island is used for hydroelectric power. About 74 billion gallons were used for this purpose in 1980, with much of it being reused for sugar cane irrigation or other purposes.

Tomorrow: Legal battles over Hawaii's "pure sweet" water.

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A-6 Honolulu Star-Bulletin Monday, September 19, 1983

For Island Water Authorities

Chemical Contamination Newest Worry

By Harry Whitten
Star-Bulletin Writer

FOR years it was assumed that contamination of water in Hawaii meant salt-water intrusion, resulting from taking too much water out of the wells that tapped the underground supply.

This past summer Oahu residents became aware of chemical contamination when wells at Kunia, Mililani and Waipahu were closed because the pesticides dibromochloropropane (DBCP) and ethylene dibromide (EDB) were found in tiny amounts.

A forecast of this summer's troubles had been the closure of a Kunia well in 1980 because of discovery of small amounts of the two pesticides.

This summer's problems have raised all kinds of questions, for many of which there are as yet no answers. Is the tiny amount of the pesticides found in the water enough to pose a hazard to health? What are safe limits? How long can a person be exposed before health is affected? What can the pineapple industry do to protect its crops from nematodes, the tiny root worms that were controlled by the two pesticides?

AND FINALLY, how can modern society gain the benefits of pesticides and other chemicals without also getting the harmful effects?

Modern man is not apt to stop their use, even though some of them have opened up a Pandora's box of unexpected problems.

The state Department of Health, charged with protecting the quality of Hawaii's water, has turned to the U.S. Environmental Protection Agency for answers and has expressed frustration about the amount of time it takes for the federal agency to set standards. It appears that scientists don't yet have many of the answers and won't until many years of research have been done. In the meantime, the number of chemicals used by modern man keeps increasing.

Chemical contamination of water became a concern on the Mainland before it did in Hawaii. In fact, this summer's testing resulted from a call by the EPA, reporting that sampling in California had revealed presence of EDB in three wells and suggesting that a sampling be done here also to find out if pesticides had percolated into the aquifer.

THE HEALTH Department started sampling, found EDB as well as DBCP, and the Honolulu Board of Water Supply closed wells in which the contaminants had been found.

The state Department of Agriculture, which issues permits for pesticides, also got into the act and took soil samples.

The largest amount of DBCP found, 90 parts per trillion in Mililani Well No. 5, was way below the safety level used in California of 1,000 parts per trillion, or one part per billion. Is the California standard adequate? No one really knows, but the governor's water task force recommended that 20 parts per trillion be set as the acceptable level for DBCP.

Navy Capt. John E. Osborne, a doctor who is director of the Occupational Environmental Health Service at the Pearl Harbor Naval Medical Clinic, filed a minority report, saying he would prefer the California standard of one part per billion.

He said the risk of cancer from exposure to DBCP "is not nearly as important as the 10 deaths that occur every year as a result of vaccinations, the 150 deaths every year related to contraceptive use or the 1,000 every year as a result of bicycle accidents."

IN A WORLD where funds are limited and there are many hazards to health, Dr. Osborne's statement is bound to raise questions as to the best use of available funds.

The EPA has not yet established standards for EDB, a source of frustration for the Health Department.

To protect public health, the Congress passed the Safe Drinking Water Act in 1974 and amended it in 1977. Thomas E. Arizumi, as chief, drinking water section, Department of Health, has the responsibility of administering Hawaii's participation in the program.

Arizumi explained that the law requires that every community water supply serving 15 or more connections or 25 people must ensure that its water meets minimum standards of purity. The EPA has established standards (or "maximum contaminant levels" in technical language) for 10 chemicals, six pesticides, bacteria, radioactivity and turbidity (cloudiness). They are called "interim" standards because research continues on drinking water contaminants.

In the 1974 law, Congress said it preferred that states take on the responsibility of the new program. Each state must adopt drinking water standards at least as strict as the national standards and may set stricter ones if it wishes. Each state also must be able to carry out adequate monitoring and enforcement, and if the state doesn't, EPA will step in and conduct the program itself.

HAWAII'S STANDARDS were as strict as the federal so it was given responsibility for enforcement. Hawaii's program operates under the EPA and is audited to be sure it is implemented. Total funding for the safe drinking water program is about 75 percent federal, 25 percent state.

The state's program involves administration, surveillance, monitoring and technical assistance. The Health Department has a laboratory certification program, Arizumi said, with labs certified by the Health Department and EPA as to quality, methodology and other matters. The Board of Water Supply tests its own water.

State labs can provide answers to chemical questions, but Hawaii does not have capability for radionucleids, so this work is contracted out to a California lab. The Health Department tests for disease, can identify potential sources of contamination and inspects where interstate carriers get water, such as harbors and airports.

It has enforcement authority any time maximums are exceeded. For community sources, newspapers, radio and TV stations must be notified; for non-community systems notices must be posted in conspicuous places.

The Health Department must approve all new sources of potable water.

Arizumi said that much of Hawaii's work in surveillance and monitoring of health risk levels is a pioneer effort, since not a great deal has been known. Mainland tests for DBCP have found levels of 50 to 100 parts per billion after treatment, levels far higher than in Hawaii. Arizumi has had a call from Orange County, Fla., asking for information on what Hawaii is learning.

Thomas E. Arizumi
Drinking water protection

THE BOARD OF Water Supply's use of cooling towers to remove DBCP from a Mililani well is expected to have nationwide implications.

While amounts of chemical or microbiological contamination have been increasing nationally, so has the ability to detect contaminants been improving. An example of the improvement is the ability to detect parts down to the trillionths.

An acute, or immediate illness, may come from a virus or poison in water. Chronic problems, that may develop over many years, are not so quickly diagnosed, however. There is scientific concern that prolonged exposure to certain contaminants, even at very low levels, may increase the incidence of cancer and heart disease.

A major part of the effort to protect water sources is the construction of sewage treatment plants, also known as wastewater treatment plants, and the pump stations and interceptors connected with the plants.

Since 1960 there have been 119 projects on the major islands, with federal grants totaling almost $293 million. The formula has been 75 percent federal funding, 15 percent county and 10 percent state, but the formula will change on Oct. 1, 1984 to 55 percent federal, 27 percent county and 18 percent state.

THE AMOUNT OF federal grants has varied from year to year, but has been about $19 million in each of the last two years, according to Dennis Tulong, of the Health Department's wastewater treatment works, construction grants branch.

Major projects in recent years have included the Sand Island, Honouliuli, Kaneohe-Kailua and Lahaina, Maui, systems.

The Health Department also has adopted rules and regulations regarding underground injection, the subsurface disposal of liquid wastes. Regulations have been in effect since 1973, but they have recently been reformulated, with major changes, and are now before the governor for his approval.

Hearings on the new technical rules that detail the manner in which waste water can be injected into the ground have been held, according to Don Horio, Health Department spokesman.

The regulations are aimed at preventing pollution and protecting ground water sources.

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Money, Distribution Top Neighbor Isles' Problems

By Harry Whitten
Star-Bulletin Writer

ONE of the issues the Advisory Study Commission on Water Resources will wrestle with in development of a water code is that of home rule.

Neighbor Island officials have argued that each Island's water situation is different — on Oahu some residents of the Windward side even object to export of water to Honolulu.

The Neighbor Islanders do have a valid point in that they have adequate reserves of ground water to last well past the year 2000. Most of their problems involve financing and distribution.

Here is an outline of the situations:

BIG ISLAND — The County of Hawaii has enough water and it's of good quality, according to William Sewake, managing engineer, Department of Water Supply. The problem is that the population is spread out, financing is a problem, and there have been droughts.

The supply situation is complicated with 20 separate systems, varying from the smallest, Kapoho with 18 service connections, to the largest, Hilo, with more than 10,000. The systems are dependent on wells, springs, streams, tunnels into dikes, or a combination of types.

The cost of electricity is high. The Island's growth area has been on the dry Kona side, while the windward side gets much surface water.

"Generally, the quality is good, but we chlorinate as a matter of precaution."

Sewake said. Chlorination is done even in Puna and Kona, which depend on ground water.

"So far we've had no trouble with pesticides in water, knock on wood," Sewake said. "We appear at hearings to express concern when farm interests want to use pesticides near water sources."

Because of surface water drying up during droughts, the department is drilling more deep wells. It is increasing storage at Waimea with a 100-million-gallon reservoir and plans another, with 50-million-gallon capacity, for next year. The reservoir is lined to prevent leakage, but this is costly.

The basic rate is 85 cents per 1,000 gallons, with a rate for agriculture 10 cents cheaper after the first 25,000 gallons.

At times the department will ask developers to build their own water systems, pointing out the savings in time if that is done.

MAUI — Enough sources are available that there isn't much likelihood of Maui running out of ground water by the year 2000, according to William S. Haines, director, Department of Water Supply.

Chief problem at present, he says, is compliance with the federal Safe Drinking Act and the department is also exploring the problem of getting added storage in upcountry Maui. Water for that area has had a dirt and high turbidity problem, and bringing it into compliance with the Safe Drinking Act will be expensive.

Farming takes 50 percent of the water upcountry and 80 percent of the water in lower Kula. During the recent drought, the department kept up with the demand, Haines said, but there was not enough gravity flow.

"We asked people to conserve, not to wash their cars, or do excessive irrigating," he said. "The voluntary response was good."

The Central Maui system gets water from wells in the Waihee-Waiehu area, north of Wailuku, and there is a very good aquifer there, he said. Sugar cane in central Maui gets water from the central Maui aquifer.

At present the department is extending a 30-inch pipeline along the coast to the boundary of the Seibu property at Makena. It won't be 30 inches all the way and will serve other resorts along the way.

Molokai, also part of Maui County, has a hodge-podge of private, state and county systems. A study is in its first phase on how to improve the system.

There are still many sources possible for development, but the long distance that water has to be transported is a problem.

Water developments on Lanai, also part of Maui County, are all private.

KAUAI — "We have the ground water; the chief problem is finances," says Raymond H. Sato, manager and chief engineer, Department of Water.

He said the demand on Kauai is much smaller than Oahu's and that the department pumps only 7 to 8 million gallons daily for domestic use. Surface water supplies only 3 percent of the domestic water.

"We have only 12,000 consumers, which means our revenues are limited," Sato said. "The state has helped out by drilling test wells. Developers have been required to drill wells for their projects. They are willing to do it to speed things up.

The ordinary consumer pays 72 cents per thousand gallons. There are also special agriculture rates, 50 cents per 1,000 gallons for the first 25,000 gallons, after which the rate drops to 25 cents per 1,000 gallons.

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Next Century Poses Crucial Problems

Water Officials Eye Needs After 2000

This is the last report in a five-part series of articles about Hawaii's water, its history of development and use, the agencies involved, the legal issues, its effects on agriculture and development and our future needs.

By Harry Whitten
Star-Bulletin Writer

THE year 2000 has an epochal sound, as if it marks the end of one era and the beginning of another.

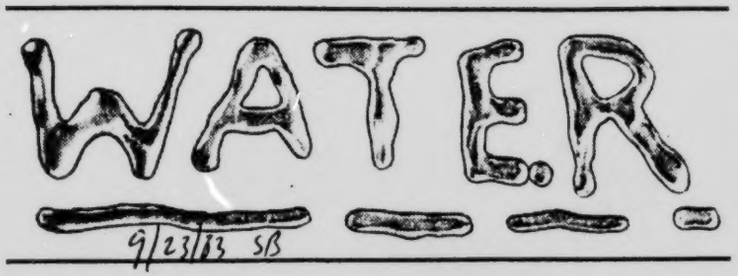
For Oahu, hydrologists estimate that the limit of ground water possibilities will be reached by that year. The Neighbor Islands are in better shape: they have adequate reserves for some time in the future.

State and county officials are planning for the future and are developing projects to take care of needs in the next few years as well as exploring programs for the next century.

The programs range from conservation today to projects further into the future, such as desalinization of sea water or obtaining fresh water as a byproduct of ocean thermal energy conversion (OTEC). They include drilling new wells, making more use of surface water, use of sewage effluent for irrigation, trade-offs with plantations for fresh water, use of brackish water, dual water systems, stretching fresh water supplies by blending, and putting a membrane across one of the Pearl Harbor lochs.

Projected domestic demand on Oahu by the year 2000 is 181 million gallons daily, compared with a bit over 130 million gallons daily now.

The programs



CONSERVATION — Both Kazu Hayashida, manager-chief engineer of the Honolulu Board of Water Supply, and Robert T. Chuck, manager-chief engineer of the state Division of Water and Land Development, emphasize conservation. Chuck said that the average use on Oahu is 190 gallons per person per day. This can be reduced, thus permitting supplies to last longer.

The Board of Water Supply instituted a conservation program in 1978 after a dry period caused water heads to drop. Edward Hirata, who was then the board's manager-chief engineer, said that as a result of the program, consumption declined 8 million gallons per day, from 142 million gallons per day to 134 million gallons per day, despite 2,000 more customers.

The board also adopted far-reaching new regulations that it could put into effect if the water table falls or the salt content of the underground supply increases. Its regulations cover both public and private wells, including plantation wells.

In response to danger signals, the board will call for voluntary restraint on consumption (stage one.) If this does not work, it can allot consumption by sectors (stage two) and can order cuts in consumption of up to 10 percent. If the problem becomes critical (stage three), the board can order cuts in consumption from private wells by as much as 30 percent. It can turn off public fountains, ban the serving of water in restaurants, the watering of lawns, the washing of cars and the use of

Turn to Page A-6, Col. 1

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A-6 Honolulu Star-Bulletin Friday, September 23, 1983

Ideas Range from Reverse Osmosis to OTEC Byproduct Use

Oahu Exploring Projects for Needs Beyond 2000

Continued from Page One

swimming pools.

The board has not yet used this extensive new power. It has been depending on the cooperation of the public and on public relations campaigns. It has available leaflets on how to detect leaks, on how to save water in the bathroom, kitchen and around the house, and on plants that don't require much water.

The present plumbing code requires water-saving devices on all new construction but is silent on remodeling or retrofitting.

"We don't tell people not to use water, we tell them to use it wisely," Hayashida said.

The shift from furrow to drip irrigation by plantations results in more efficient water use, although drip irrigation does not return as much surplus water to the water table as furrow irrigation.

NEW SOURCES — They are becoming more expensive to develop because the easier, more abundant sources have already been developed. There are new sources, however. Through the year 1990 the Board of Water Supply has planned 13 preferred basal well projects for development of 8.65 million gallons daily. Another six secondary basal sources have been identified, with an estimated sustainable capacity of 3.5 million gallons daily. A total of 22 preferred dike, perched and caprock sources are planned for development through 1990, with an estimated capacity of 21.5 million gallons daily. Another five secondary sources have an estimated capacity of 3 million gallons daily.

The program emphasizes development of water sources on the Windward side, the Waianae area, and in Honolulu in order to alleviate the pressure on the Pearl Harbor Basin. In time more water from Windward Oahu can be expected to go to Honolulu. There is an existing pipeline that goes around Makapuu Point with a capacity of 2 million or 3 million gallons daily, but only about 3,000 gallons daily are sent through it now, just enough to keep the water from getting stagnant.

Greater use of the pipeline could supply Hawaii Kai and reduce the need to import water from the Pearl Harbor area. Some Windward people object to the idea of exporting water to Honolulu, but Hayashida points out the water board must plan for the entire Island. Windward sources are small and scattered.

SEWAGE EFFLUENT — Oahu Sugar Co. signed a 15-year agreement with the city in July 1980 for use of effluent from the Mililani wastewater treatment plant. A $6.3 million construction project is required to make possible the use of the effluent; the pipeline for it is approaching completion and testing of the use is expected to begin next March.

At present, the effluent can only be used with furrow irrigation because it clogs up the small holes in drip-irrigation tubes.

Oahu Sugar has promised to keep 1,400 acres in furrow irrigation for experiments with effluent use and also for use of wastewater from its mill.

Laying filters are being discussed for Campbell Estate land, the growing of grass or alfalfa that could be irrigated with effluent. The grasses would absorb nutrients, act as effluent filter, resulting in less solids and bacteria.

BRACKISH WATER — This water, from caprock or wells that have become salty, is defined as water having a salinity content greater than 250 parts per million and less than 4,000 parts per million, as measured in chlorides. Domestic water must have less than 250 parts per million of chlorides.

A study conducted for the water board has identified brackish water sources in the area from Aiea to Kahe Point. Preliminary cost estimates indicate reverse osmosis is the most promising demineralization process, but it is a relatively new technology, which would make a pilot plant desirable. Before the board decides to go ahead with a pilot plant, a more detailed study would be necessary. Current cost is estimated as twice that of conventional production.

Caprock water is that contained in the caprock, as distinct from basal water. It is a small source that has been uneconomical in the past, but now the board sees possible production of 500,000 to 1 million gallons daily. Hayashida says this water might be used for watering plants in Kapiolani Park, or the area around the State Capitol and City Hall.

TRADES — Exchanges have been proposed that would give the board potable water while water of poorer quality would go for irrigation of highway rights of way, interchanges, airport landscaping or on plantations.

The Waiahole Ditch carries fresh water from the Windward side to Oahu Sugar's cane fields. State water division chief Chuck said that perhaps this water could be exchanged for water from certain Pearl Harbor wells that are becoming too salty for domestic use. The ditch carries about 30 million gallons daily, but is not operating at its capacity up to 50 million gallons daily. State and city officials say such a trade could be done, but environmental studies are needed as well as cost projections.

Kalauao Springs, near Pearl City, have some impurities, but its water would do for irrigation, Hayashida says. The state Department of Transportation has made preliminary plans for its use in irrigating highway strips, the Halawa Interchange, airport landscaping and so on.

The board is now negotiating with Hawaiian Electric Co. for use of water from Waiau Springs, near Pearl City, used infrequently for cooling at the utility's Waiau plant. Hayashida says there is a potential of 5 million gallons daily from this source, up to 9 million gallons daily if it is blended. Use of water from these springs would not dip into the 225 million gallons daily that is the sustainable yield of the Pearl Harbor Basin.

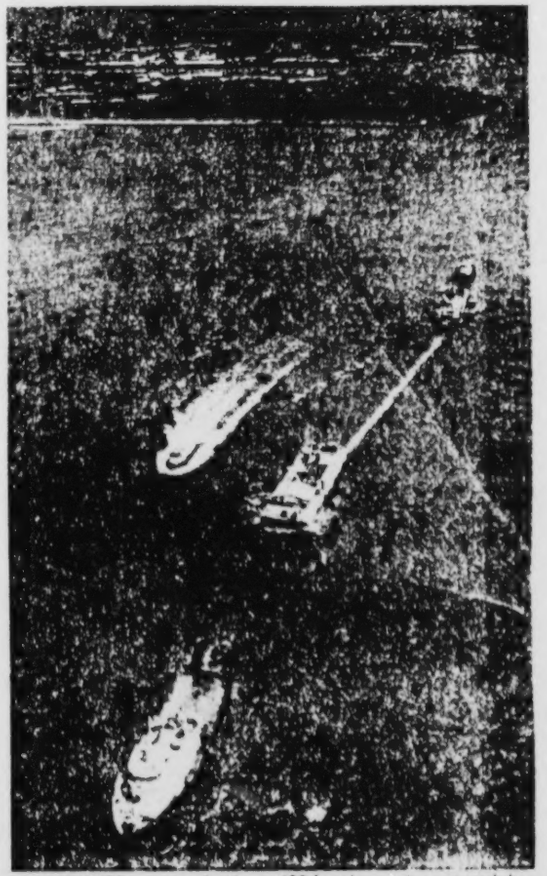
DUAL WATER SYSTEM — This system would have one system with potable water for domestic use and a second system with brackish or other inferior water for irrigation or fire protection. Two different water rates would be set up, with a higher rate for potable water. The proposal would permit use of inferior water directly without treatment.

Discussions concerning a dual system have been held with Campbell Estate for projected developments such as Ewa Marina, Ewa Village and West Beach. "This is the most ideal area on Oahu for the system," Hayashida said.

From 60 to 70 percent of household use doesn't require potable water, he said.

BLENDING — Supplies can be stretched by blending fresh with brackish water, so long as the resulting blend has less than 250 parts per million chlorides. Blending has been used for years to stretch supplies on the Neighbor Islands and could be used with water from the new Makakilo well.

BULKHEADING DIKES — Koolau dikes could be bulkheaded to restore original ground water during winter seasons. This stored water could then be used in combination with Schofield high-level ground water during dry weather periods to stabilize basal aquifer pumpage in the Honolulu and Pearl Harbor areas.



BYPRODUCT—A tug hauls a 400-foot-long pipe, rigged behind a barge, out to sea as part of the ocean thermal energy conversion research project. OTEC systems have a desirable byproduct in fresh water, a situation that interests government officials who are exploring programs to provide for future fresh water needs. — Star-Bulletin Photo

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The Honolulu Star-Bulletin

A COOL DRINK — Nine-year-old Keiko Honda quenches her thirst at a park fountain, probably unaware of the complex process involved when one turns on the water tap. That process is explained in the graph below. — Star-Bulletin Photo by Ken Sakamoto

SALINE AGRICULTURE — Molokai has grown alfalfa and some truck crops successfully with water containing 80 to 120 grains of sodium chloride per gallon. Saline agriculture, however, requires more frequent application of water and good farming practices to prevent a buildup of salts in the soil. Hayashida said that grass can take 600 parts per million of chlorides.

DESALINIZATION OF SEA WATER — Oahu was considered for a pilot desalinization plant during the Carter administration, but three other places were chosen. None of the plants worked well. "We don't anticipate any federal funds for such a project," Hayashida said.

He says, however, that Oahu should consider use of the technology at some time in the future. First the Board of Water Supply would have to make plans, work on design, figure out the cost factor and then the final plans.

"This would be eight or 10 years down the road, but we will have to consider it," Hayashida said.

At present getting fresh water from sea water is at least 10 times as expensive as pumping it out of the ground, but costs should come down in time. Despite the cost, desalinization projects amounting to $2 billion are under way in nations around the Arabian Gulf. Hong Kong has the world's largest desalinization plant. A new plant at Key West, Fla., produces 3 million gallons a day, using the reverse osmosis method. The cost is $5 per 1,000 gallons of potable water, which is less than one-half cent per gallon.

OTEC — The open cycle system of ocean thermal energy conversion has a desirable byproduct in fresh water. Commercial generation of electricity through OTEC is probably some years down the road, but would be cheaper than desalinization of sea water.

OTHER IDEAS — The Water Resources Research Center has started work on design of a flexible membrane to impound run-off water from Waikele Stream at West Loch, Pearl Harbor. The idea is to conserve fresh water from the stream that otherwise would go into the harbor.

Use of airport storm-water run-off has been proposed as an alternative supply. Investigations by the Water Resources Research Center show it would be no good for drinking water, but might have other uses. Water is collected in this fashion in some of the islands of Micronesia.

Suggestions also have been made about shipping in water by oil tanker.

It is obvious that there are plenty of alternatives. As the year 2000 approaches, more of them will be used.

Tapes Offer Water Data

Videotapes of a workshop about water in Hawaii are available for loan to the public from the City Council Information Services office at City Hall.

Board of Water Supply chief Kazu Hayashida and Robert Chuck of the state Department of Land and Natural Resources discussed a number of water-related issues at the workshop, which was held Sept. 14.

Some of the areas explored dealt with the concerns of how many people can be supported and what areas are best suited for development under the existing municipal water system.

The tapes may be borrowed for four days and a returnable $25 deposit is required. More information can be obtained by calling 523-4867.

9/23/83 SB

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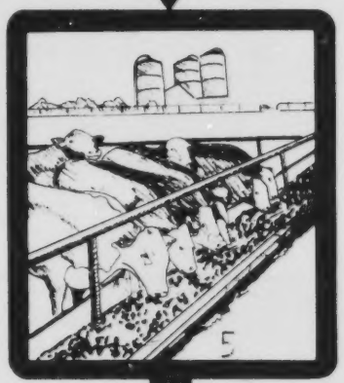
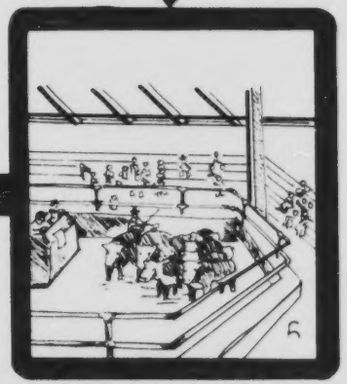
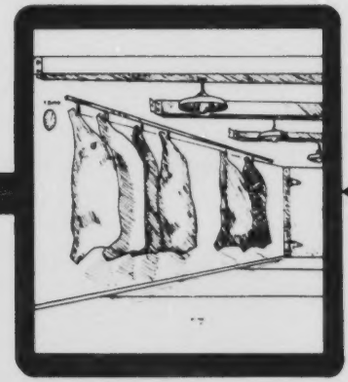
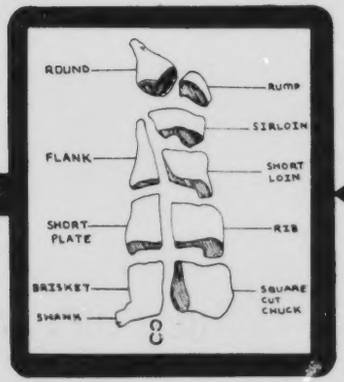
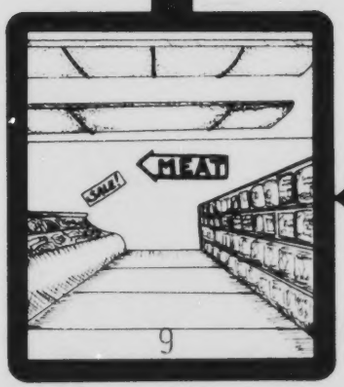
FOOD CHAIN

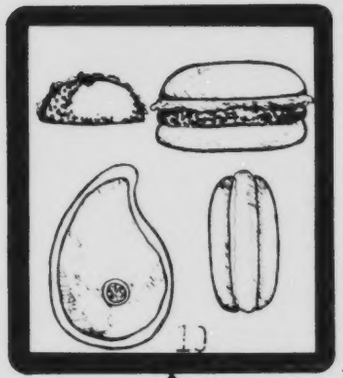












1. The sun, the earth and the farmer provide nourishing pasturelands.
2. The best cattle are bred to produce quality stock.
3. Cattle ranchers protect the cattle from diseases.
4. Cattle graze freely on the grasslands and mature in size.
5. At feed lots, cattle are fed special grains just before marketing to increase their size.
6. Cattle are auctioned to wholesale buyers for slaughter and dressing.
7. Dressed beef carcasses are sold to retail outlets.
8. Butchers carve carcasses into various cuts of meat.
9. The beef is packaged for sale to the public.
10. Beef is prepared for consumption in many different ways.

315

316

Photo, Hawai'i State Archives

Kamehameha I

The great warrior chieftain who fought to unite the various Hawaiian island chiefdoms in the late eighteenth and early nineteenth centuries was born in Kohala on the Island of Hawai'i in the 1750's according to most estimates.

He was recognized as the son of chief Kalanikupuakeōua, usually known as Keōua, and high chiefess Keku'iapoiwa. His natural father may have been the great chief Kahekili of Maui against whom he later plotted battles. He did wait until Kahekili died, however, before he moved to take over the Maui chiefdom.

As a youngster, Kamehameha lived a solitary life in Kohala with his chiefly mentor, Nae'ole, who had saved him from being killed at birth. When Captain James Cook visited Hawai'i in 1779, the young chief Kamehameha was one of those in attendance upon the great chief Kalani'ōpu'u. Upon his uncle's death, Kamehameha received charge of the war god Kūka'ilimoku from the deceased chief. He later fought his uncle's sons, his own cousins, Kiwala'ō and Keōua Kū'ahu'ula, to gain control of the island of Hawai'i.

He expanded that control through battle victories on Maui and O'ahu in the 1790's. He acquired Kaua'i politically after failing to conquer that chiefdom several times. He then provided wise and effective leadership to the kingdom of Hawai'i until his death on May 8, 1819.

PRINCE JONAH KŪHIŌ KALANIANA'OLE

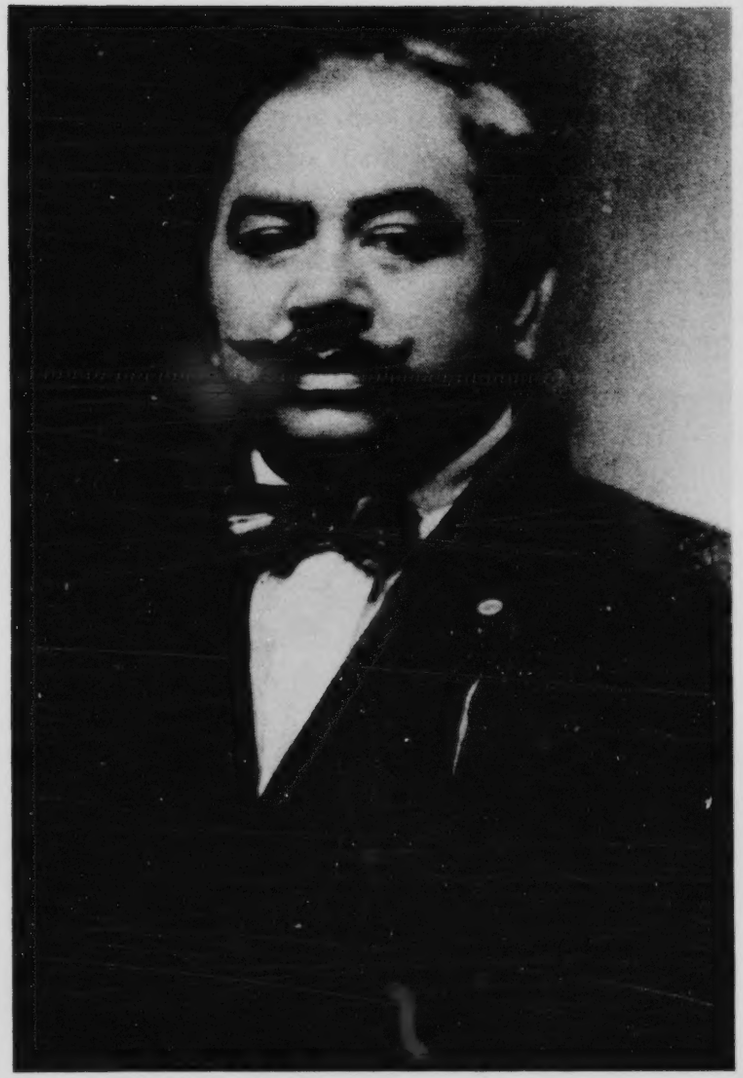
Prince Cupid, as he was later called, was born to chief David Pi'ikoi Kahalepouli and chiefess Kinoiki Kekaulike on March 26, 1871 at Koloa, Kaua'i not far from the Spouting Horn along the southern coast of Kaua'i.

He was descended from Ka'eokūlani and Kaumuali'i on his maternal grandmother's side and from Alapa'i on his father's side. He was raised in a lifestyle of chiefly favor but lost his parents at an early age. He and his brothers, Edward Keli'iahonui and David Kawānanakoa, were hānai 'ia (adopted/raised) by the sister of their mother, Queen Kapi'olani, wife of King Kalākaua. Edward died shortly after their mother but Kūhiō and Kawānanakoa lived on to become very involved in the changing political and cultural lifestyles in their beloved Hawai'i.

Kūhiō Kalaniana'ole went off to school in California and in London. As a young man he had the opportunity to spend time in both Europe and Japan. He was well-traveled, well-read, a good conversationalist and an excellent prospect for succession to the Hawaiian throne behind his uncle Kalākaua's sister, Lili'uokalani, and niece, Ka'iulani.

He never had the chance to become king since Lili'uokalani was illegally dethroned by the American sugar interests and businessmen in 1893. He and his brother were arrested in 1895 for leading the counter-revolution to put their aunt back upon her rightful throne. He spent time in jail and then set out to see the world upon his release. He and his wife, Elizabeth Kahanu, returned in 1901 and he became involved in local politics. In 1902 he became the second Delegate to the U.S. Congress where he served for 20 years until his death on January 7, 1922.

He is lovingly remembered as Ke Ali'i Maka'āinana, the chief (for) the citizens since he strived so long and hard in the democratic life of the Territory to achieve certain rights and benefits for his people which had been lost when their monarchy was taken from them. The Hawaiian Homes Act is the most lasting memorial to his name and his work.



Photo, Hawai'i State Archives

Important Cultural and Historical Contributors to Our Island Communities (Sample)

1. Ni'ihau

   Kahelelani
   Benjamin Kanahele
   Robinson Family

2. Kaua'i

   Ka'eo(kūlani)
   Kaumuali'i
   Prince Jonah Kūhiō Kalaniana'ole
   Rice Family
   Wilcox Family
   Charles Fern

3. O'ahu

   Kahahana
   Kalanikūpule
   Kuakini, Acting Gov. of O'ahu
   John Owen Dominis, Governor
   Duke Kahanamoku
   John A. Burns
   Daniel K. Inouye

4. Moloka'i

   Lanikāula
   Father Damien
   Lot Kapuaiwa Kamehameha
   Cooke Family
   Dudoit Family
   Duvauchelle Family

5. Maui

   Kamalālāwalu
   Pi'ilani
   Kahekili
   Ka'ahumanu
   Elmer Carvalho

6. Lāna'i

   Kaululā'au
   Charles Gay
   James D. Dole
   Hector Munro
   Ka'ōpūiki Family

7. Hawai'i

   Liloa-a-Kiha
   'Umi-a-Liloa
   Keawe-a-'Umi
   Kalani'ōpu'u
   Keōua Kū'ahu'ula
   Kamehameha I
   Princess Ruth Ke'elikolani, Gov. of Hawai'i
   Mary Kawena Wiggin Pūku'i
   Edith Kanaka'ole
   Kaulukukui Family
   Shunichi Kimura

321

322

Too little knowledge of Oahu, Kauai rulers

By Samuel Crowningburg-Amalu
Advertiser Columnist

the world of
sammy amalu

4/29/84
SB/AB

Having already finished the history of the ancient Hawaii and Maui kings, I have been spending the past two months researching and writing the lives and times of the kings, princes and chieftains of Oahu and Kauai. Unlike the sovereigns of Hawaii and Maui who were quite warlike and ambitious, the monarchs of Oahu and Kauai were far more peace-loving, far more caring for the welfare of their kingdoms and their people.

In fact, it is really a great pity that the young people of Hawaii have never been exposed to the knowledge of who these ancient kings of Oahu and Kauai were. It is an even greater pity that Hawaii did not have a Plutarch who could have written of these ancient kings and their lives as Plutarch did of the ancient kings of Greece and Rome. The lives of these ancient kings should be studied so young Hawaiians of today can emulate them.

Our knowledge of ancient Hawaii goes back, if at all, to the conquering Kamehameha and seldom any further. The many long centuries of Hawaii's ancient history are practically unknown.

Abraham Fornander and Samuel Kamakau did write of these ancient kings, but they took their information from the folklore of the Islands and did not have the chance to inspect thoroughly the royal chants and poetry of Hawaii. Nor are there many modern historians or scholars with sufficient knowledge of their own to penetrate these dark corridors of time. That darkness must be lifted somehow.

We do fortunately still have at least two Hawaiian scholars who are comparatively well versed in the ancient history of Hawaii, that history that antedates Kamehameha by many centuries. These two personages are Mary Kawena Pukui and Charles Kenn.

The years pass, and if we allow the knowledge of these two great Hawaiian scholars to die with them, we would have suffered an irreparable loss. The University of Hawaii, the Kamehameha Schools, and the Office of Hawaiian Affairs should and must provide the necessary funds to record for all time the knowledge that still lies hidden in the recesses of the minds of these two people.

Of the ancient history of the kings of Hawaii and Maui, some of us have probably heard the names of Lilioa and Uni-a-Liloa, of Piilani and of Kiha-a-Piilani, but I seriously doubt that there is a single person alive today who can speak intelligently of the kings of Oahu and Kauai. Unfortunately, some of the greatest princes in the entire history of these Islands were those from these two islands.

Consider for a moment King Maili-Kukahi of Oahu. Who has ever heard of him? Yet it was he who gave Hawaii its first code of laws that among other things made theft and rape punishable by death. He was the monarch who first divided his kingdom into districts which he had marked permanently so that there would be no future land disputes. He also laid out the permanent rights of the people so that they would forever be free to leave chiefs who displeased them and to seek another. He forbade human sacrifices during his reign and curbed the avarice of his chiefs and priests. He was a truly great prince.

Or consider the famed Kakuhihewa of Oahu and the equally famed Mano-Kalanipo of Kauai. Both were highly venerated by the people of all Hawaii, and Oahu to this day is known as Oahu of Kakuhihewa even as Kauai is known as Kauai of Mano-Kalanipo. Both were princes of great industry and perseverance. They both built great water courses on their respective islands and thus opened new land for agriculture. They looked after their people and did not allow the chiefs to oppress them. They both maintained large armed forces and fleets to protect their own kingdoms but never used these armies and fleets to invade other kingdoms.

The sons of these two kings: Kaihikapu-a-Kakuhihewa of Oahu and Kaumaka-o-Mano were equally judicious and wise kings who followed the policies of their fathers. As a result of their labors and of the labors of the kings who followed them, the islands of Oahu and Kauai were easily the most prosperous in the group.

Some of the kings of Kauai did not like what they saw going on in the other kingdoms of ancient Hawaii. They lowered a curtain of isolation over Kauai that lasted for three whole generations of kings. Finally, there came King Kawelo-Mahamahaia who raised this curtain of isolation and allowed his kingdom and people again to enter into commerce with the other islands.

He sent embassies to the courts of his neighboring kings and received embassies from them. Then he skillfully used these embassies to keep tabs on the other islands so that he could nip in the bud any plans of ambitious chiefs who might be casting an avaricious eye on his own kingdom. In addition, he kept a regal but hospitable court to which all the great artists and poets and dancers flocked to live under his patronage and protection. To the people of ancient Hawaii, both this king of Kauai, Kawelo-Mahamahaia, and his son, Kawelo-Makualua, were venerated for their gentle and kindly rule.

Then consider King Piliwale of Oahu, the son of Maili-Kukahi. He designated the area of Kualoa on Oahu as a holy and sacred place to be venerated by all. He created the law that made it imperative for all canoes passing Kualoa to lower their sails in respect. Piliwale also erected the great Temple of Lono at Mokapu where the Kaneohe Marine Station now stands. This became the greatest Lono temple in all of Hawaii, a temple dedicated to the god Lono who really loved the people and upon whose altars the blood and bodies of men were never sacrificed. Today, these holy spots on Oahu are forgotten.

The conquests and personality of Kamehameha were so great that he obscured the great kings who preceded him.

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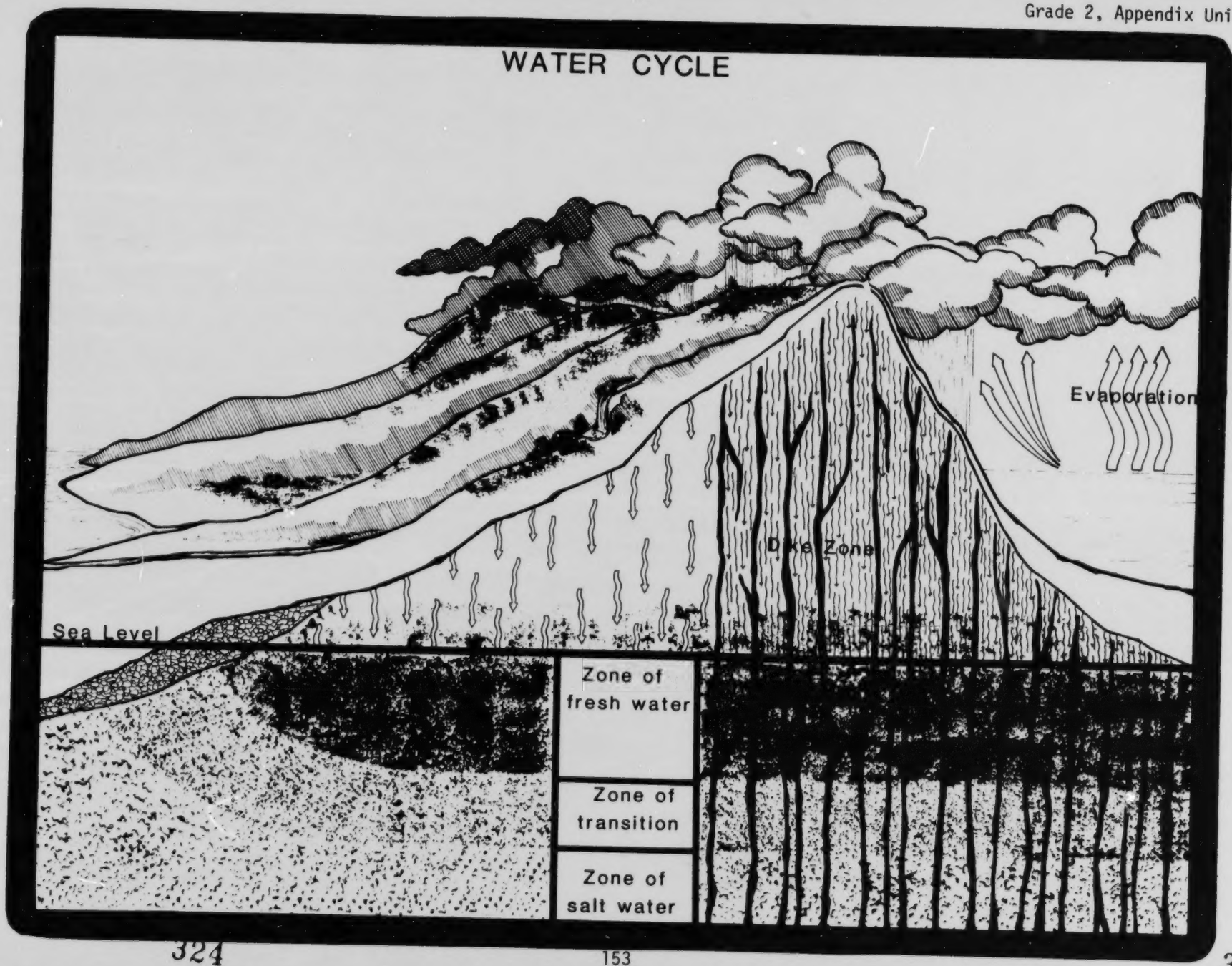

WATER CYCLE
Evaporation
Dike Zone
Sea Level
Zone of fresh water
Zone of transition
Zone of salt water

HULA INSTRUMENTS

PAHU HULA

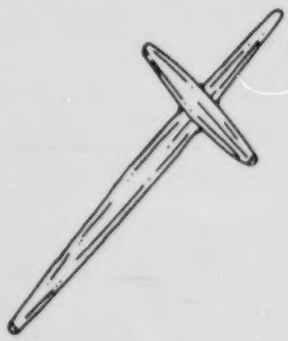
Sit before the pahu and strike the drum head with both hands, using the fingers and heel of the hand.

ʻŪLILI

Pull the string to twirl the gourds.

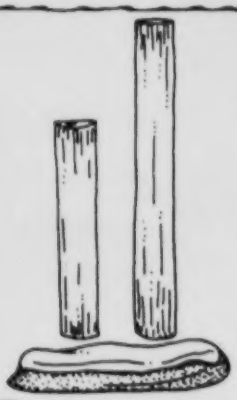
PAPA HEHI

Tip and tap the board with the foot to keep time. Use with the kā lā'au.



KĀ LĀʻAU

Hold the long rod in the left hand close to the body and strike it with the short rod.



KĀ ʻEKEʻEKE

Hold one bamboo pipe vertically in each hand, tapping down on the ground or on a stone padded by a mat or a folded piece of tapa.

IPU HULA

While seated, support the gourd with the wrist loop and left hand and thump the bottom down on the floor. Strike the side or bottom of the gourd with the fingers and palm of the right hand.

PŪNIU/KĀ

While seated, tie the coconut shell drum to the right thigh above the knee and strike the fish-skin head with a fiber thong.

Reprinted with permission from The Kamehameha Schools/Bernice P. Bishop Estate. Hoʻomāka'ika'i/Explorations 1983, p. 83

Kalo

MEDICINE

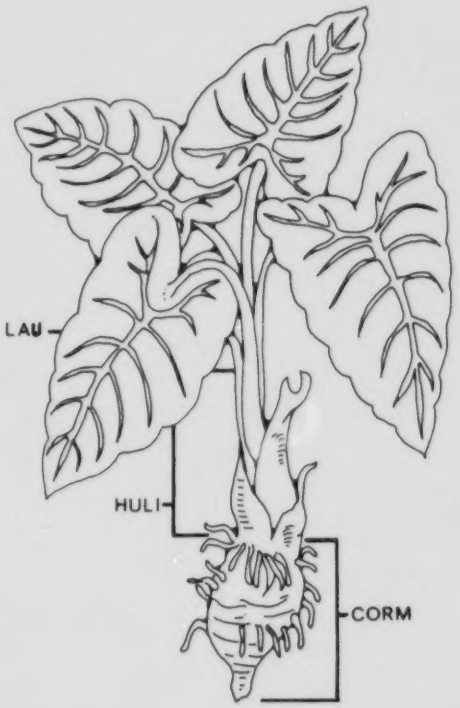
Raw leaf stem rubbed on insect bites to relieve pain and prevent swelling. Raw rootstock rubbed on wound to stop bleeding. Undiluted poi used as poultice on infected sores.

PASTE

Poi was used as paste to glue pieces of tapa together.

FISHING

Grated raw corm used as a bait for fish: 'ōpelu.



FOOD

Corm cooked in imu, peeled, and eaten. Poi most important starchy food--made from corm cooked, peeled, and pounded into a thick paste called pa'i 'ai. When water is added, the thinner paste is poi. Cooked corm sliced and dried for long trips.
Kūlolo--a pudding made by cooking grated raw corm with grated coconut meat and milk. Young leaves called lū'au--cooked with pork in imu (laulau). Leaf stems peeled, cooked for greens. Corm also used to fatten pigs.

DYE

Juice from poni variety yielded rich red dye used for dyeing kapa. Also 7 other varieties used for dyes.

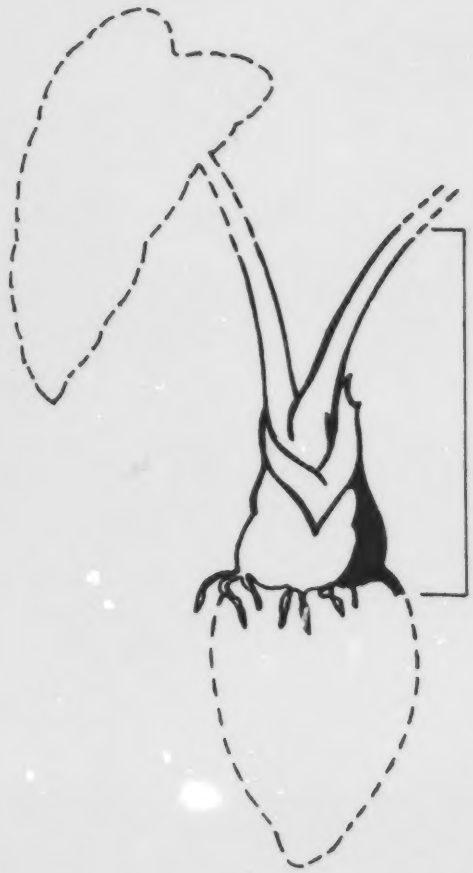
275 to 300 varieties known to early Hawaiians.

"HUKI I KE KALO"

Huki i ke kalo (Pull the taro)
Huki, huki mai.

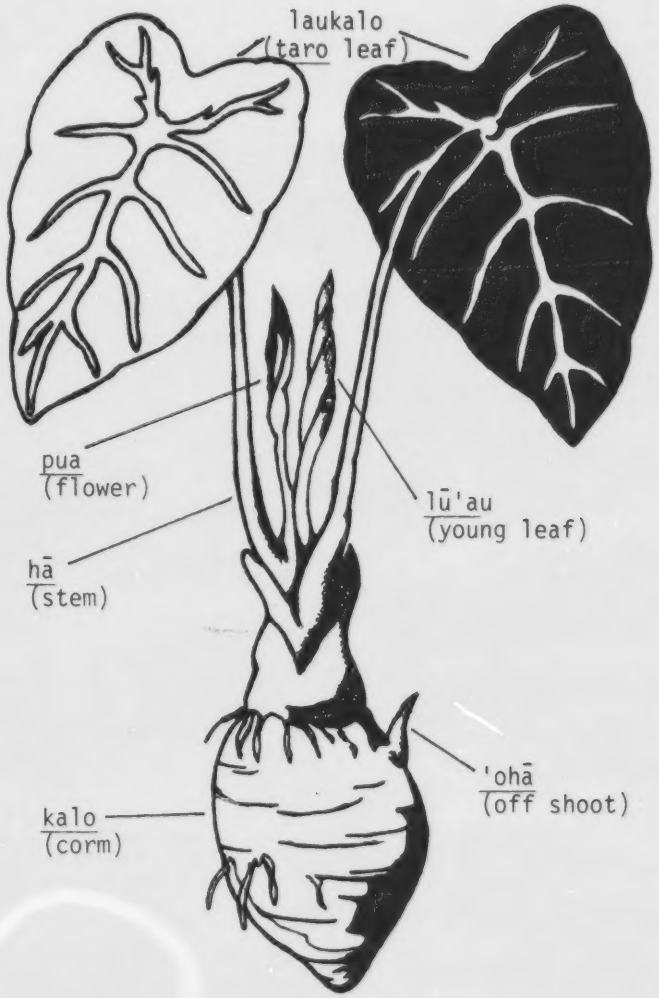
Ku'i i ke kalo (Pound the taro)
Ku'i, ku'i mai.

'Ai i ke kalo (Eat the taro)
Mā'ona mai
Mm - mm - mm

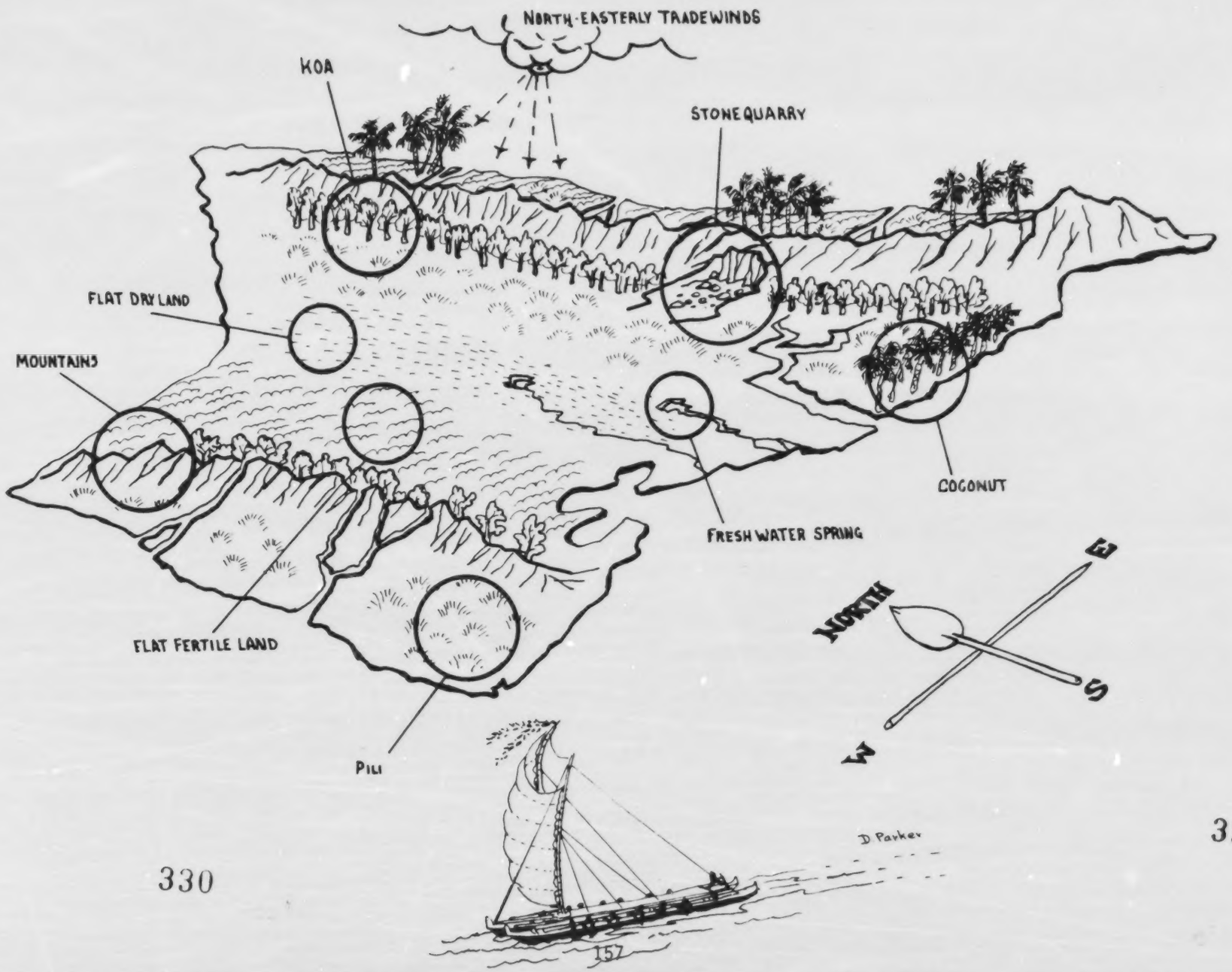


huli is that portion of the stem including the uppermost portion of the corm that was used for asexual reproduction (replanting) of the kalo plant.

Parts of the Kalo Plant



SOME NATURAL RESOURCES OF O'AHU



330

331

Summary of the legend, "The Empty Sea"

Kū'ula, god of fishing took the form of a fisherman and became head fisherman of the Shark Chief. Through the treachery of an avengeful akua Kū'ula, his wife, Hina and son, 'Ai'ai were ordered to be burned to death. Kū'ula and Hina escaped taking with them all the fish and creatures of the sea. They took revenge on the people who tried to burn them. However, they left 'Ai'ai, their son with four magic talismen designed to help the good people left without seafood, a major part of their daily diet. Through Pili a friend of 'Ai'ai, the people asked for four different sea foods. They received the knowledge for catching each from 'Ai'ai and with it a warning for the conservation of the resource.

The four magic talismen were as follows:

1. Kū'ula's special bait stick which attracted hinalea, a fish.

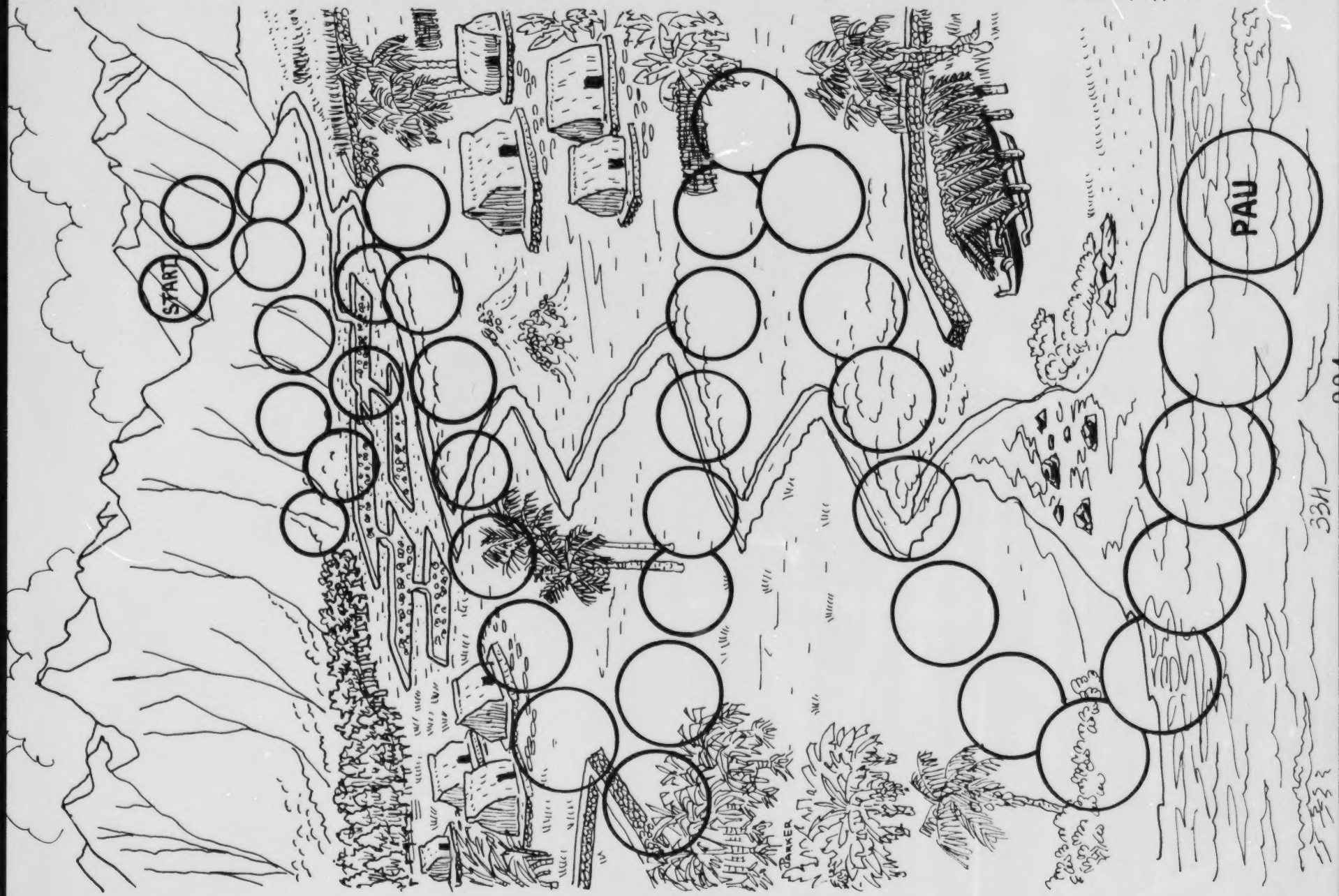
2. The special lūhe'e (cowrie-shell lure) for catching he'e (octopus, commonly called "squid").

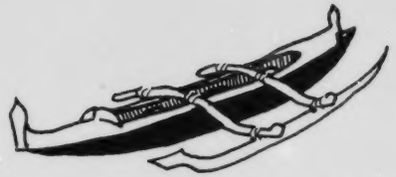
3. Four water-washed pōhaku (stones) which were dropped into the sea beyond the breakers and provided a home for āweoweo, a fish.

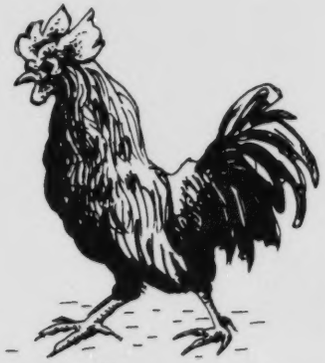
4. The small kū'ula (stone image) or fishing shrine which when placed on the rocks drew the 'a'ama (rock crab).

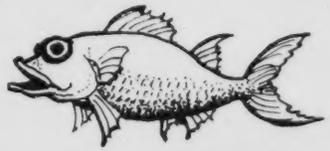
The denouement and most important message of this story centers around the breaking of the conservation kapu regarding the taking of too much sealife. This part should be stressed to the children as it speaks to many of the problems we experience today with regard to fishing and conservation of nature.

Thompson, Vivian L. Hawaiian Tales of Heroes and Champions (Illustrated by Herbert Kawainui Kane), Holiday House, New York, 1971, pp. 93-102.


START
PAU
PARKER



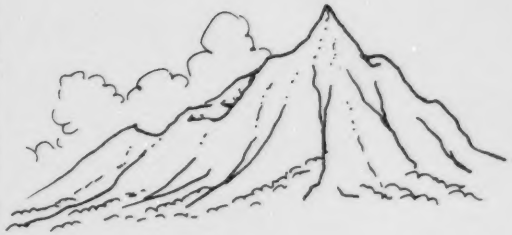


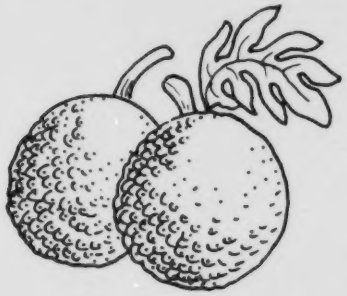


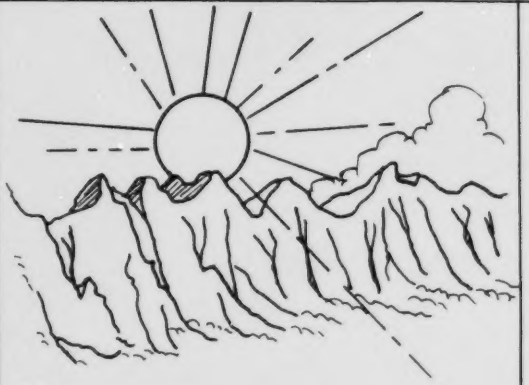
335

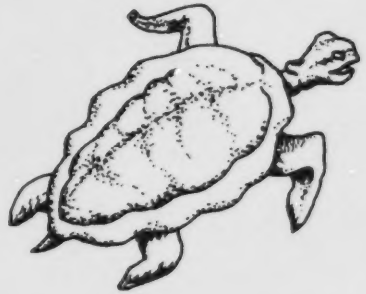
336

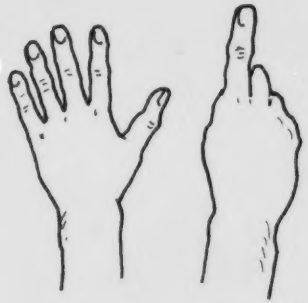
WORD CARDS











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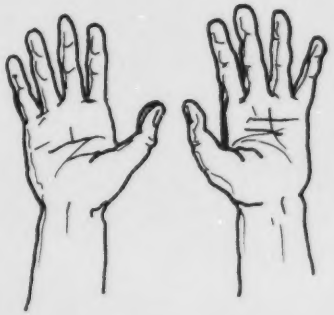


338 WORD CARDS

'EKAHI	'ELUA	'EKOLU	'EHĀ
'ELIMA	'EONO	'EHIKU	'EWALU
'EIWA	'UMI	'UMI	'UMI
'UMI	'OLE	'OLE	'OLE

339

162

340

NUMBER CARDS

KĪ	'EKOLU	KALO	KUAHIWI
'ULU	KEIKI	PALI	HONU
'EONO	MOANA	'UALA	'UMI

341

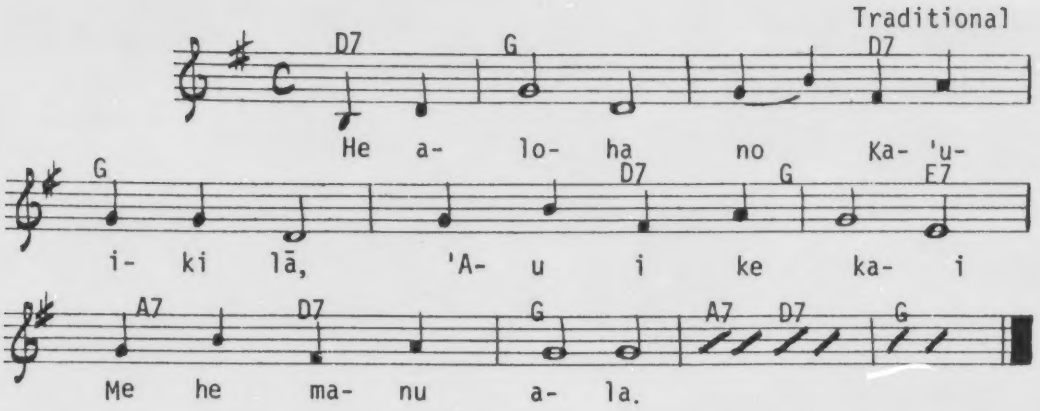
342

'ELIMA	PUA'A	HOE	WA'A
MOA	'ĪLIO	HE'E	I'A
HALE	KŌ	KOA	MAI'A

343

344

KA'UIKI

Traditional

D7 G D7 G
1. He aloha no Ka'uiki lā,

D7 G E7 A7 D7 G
'Au i ke kai me he manu ala.

VAMP: A7 (2), D7 (2), G (1)

D7 G D7 G
2. Kuhi au, 'o ku'u lei ia lā,

D7 G E7 A7 D7 G
Lei ānuenue pi'o i ka moana.

VAMP: A7 (2), D7 (2), G (1)

G D7 G D7 G
3. 'O ke kū a ka ua lā ko'iaweawe lā,

D7 G E7 A7 D7 G
Me he komo kaimana, 'ā i ka lima.

VAMP: A7 (2), D7 (2), G (1)

G D7 G D7 G
4. 'O ke ahi kaulana 'a'ā i ka nuku,

D7 G E7 A7 D7 G
'A'ā iā Ka'uiki, 'a'ā i ke kai.

VAMP: A7 (2), D7 (2), G (1)

D7 G D7 G
5. Ha'ina 'ia mai ana ka puana lā,

D7 G E7 A7 D7 G
He aloha no Ka'uiki, 'au i ke kai.

VAMP: A7 (2), D7 (2), G (1)

1. This is a love song for Ka'uiki

Extending out into the sea like a bird.

2. I thought it was my lei,

A rainbow lei arched over the ocean.

3. The column of light rain appears,

Like a diamond ring, sparkling on the hand.

4. The famous fire blazing at the rim,

Blazing on Ka'uiki, blazing over the sea.

5. The summary of the story is told,

A love song for Ka'uiki, extending out into the sea.

Hula noho - sitting hula, bright tempo

Grades 2-3

345

We Predict

Name or picture of the plant	Early Hawaiian use(s)	Use(s) today

346

347

Ahupua'a

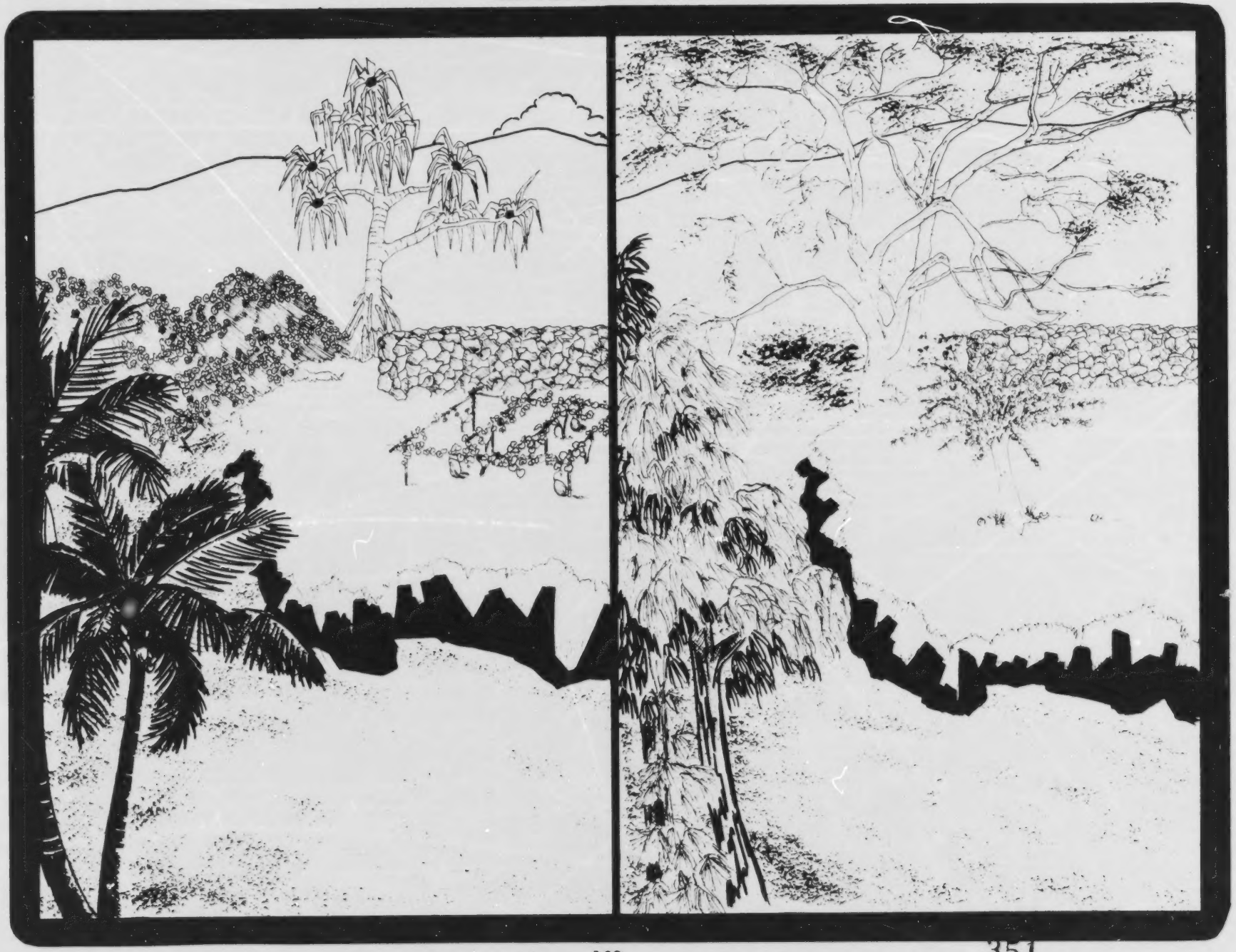
The three drawings of this appendix represent three regions of an ahupua'a: kahakai, kula, and uka. Each page is divided in half with the left side representing plants growing in early Hawai'i and the right side with plants introduced here after foreign contact.

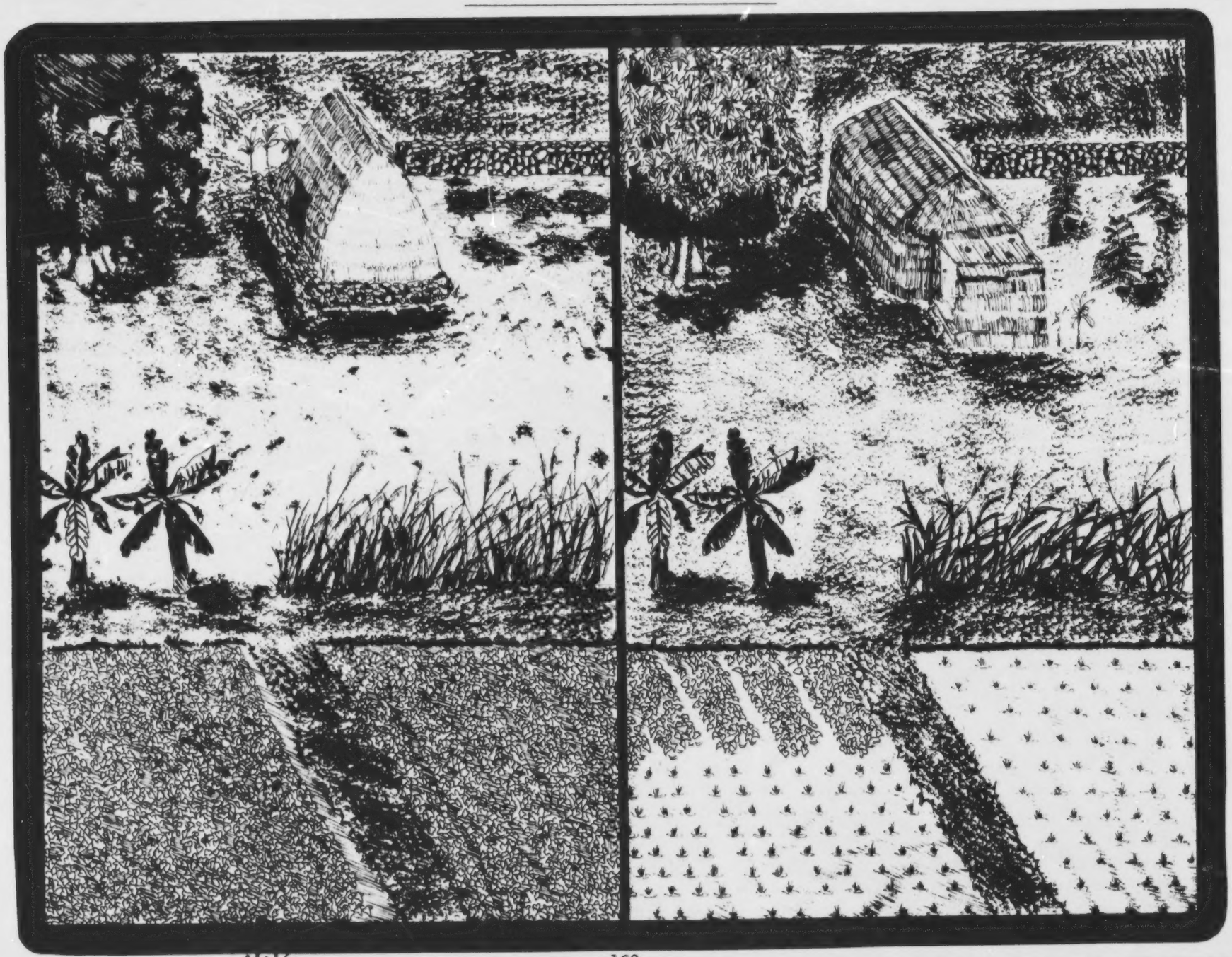
	Early Hawai'i	Modern Hawai'i
Kahakai	Hala (Pandanus)	Kiawe (Algaroba)
(Beach area)	Hau	La'amia (Calabash tree)
	Ipu (Gourd)	Paina (Ironwood)
	Niu (Coconut)	
Kula	Kalo (Taro)	Kalo (Taro)
(Inland plains)	Kī (Tī plant)	Kō (Sugar cane)
	Kō (Sugar cane)	Kope (Coffee)
	Mai'a (Banana)	Laiki (Rice)
	'Ulu (Breadfruit)	Mai'a (Banana)
	'Uala (Sweet potato)	Manakō (Mango)
Uka	Hāpu'u (Tree fern)	Clidemia
(Upland area)	Kou	Eucalyptus
	'Ōhi'a lehua	Kuawa (Guava)
	'Ie'ie	Lantana
	'Ōlapa	

348

349

AHUPUA'A (KAI)





353

AHUPUA'A (UKA)

354

355

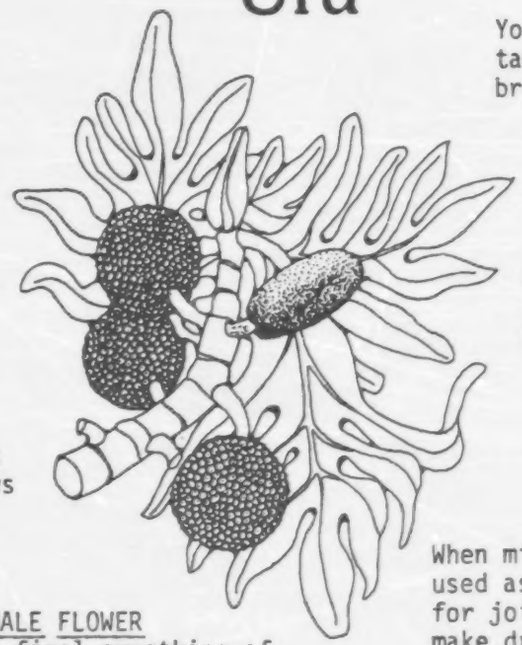
USES OF THE BREADFRUIT

ʻUlu

FRUIT
Good source of starch & Vitamin B.
Baked in imu.
Made into poi.
Used for pudding.
Used to fatten pigs.

TRUNK
Drums (pahu).
Surfboards because of lightness of wood.
Poi boards. Woodwork in houses. Canoe bows and stem pieces.

SHEATH OF MALE FLOWER
Used as sandpaper in final smoothing of utensils, polishing bowls, and kukui nuts.



DYE
Young male flower makes a tan dye. Old one makes a brown dye.

MEDICINE
Latex used for certain skin diseases.
Leaf buds used for cure of thrush ('ea).

LATEX
When milky sap solidifies, used as chewing gum. Glue for joining two gourds to make drum. Caulking to fill seams of canoe. Used to catch birds so feathers could be removed.

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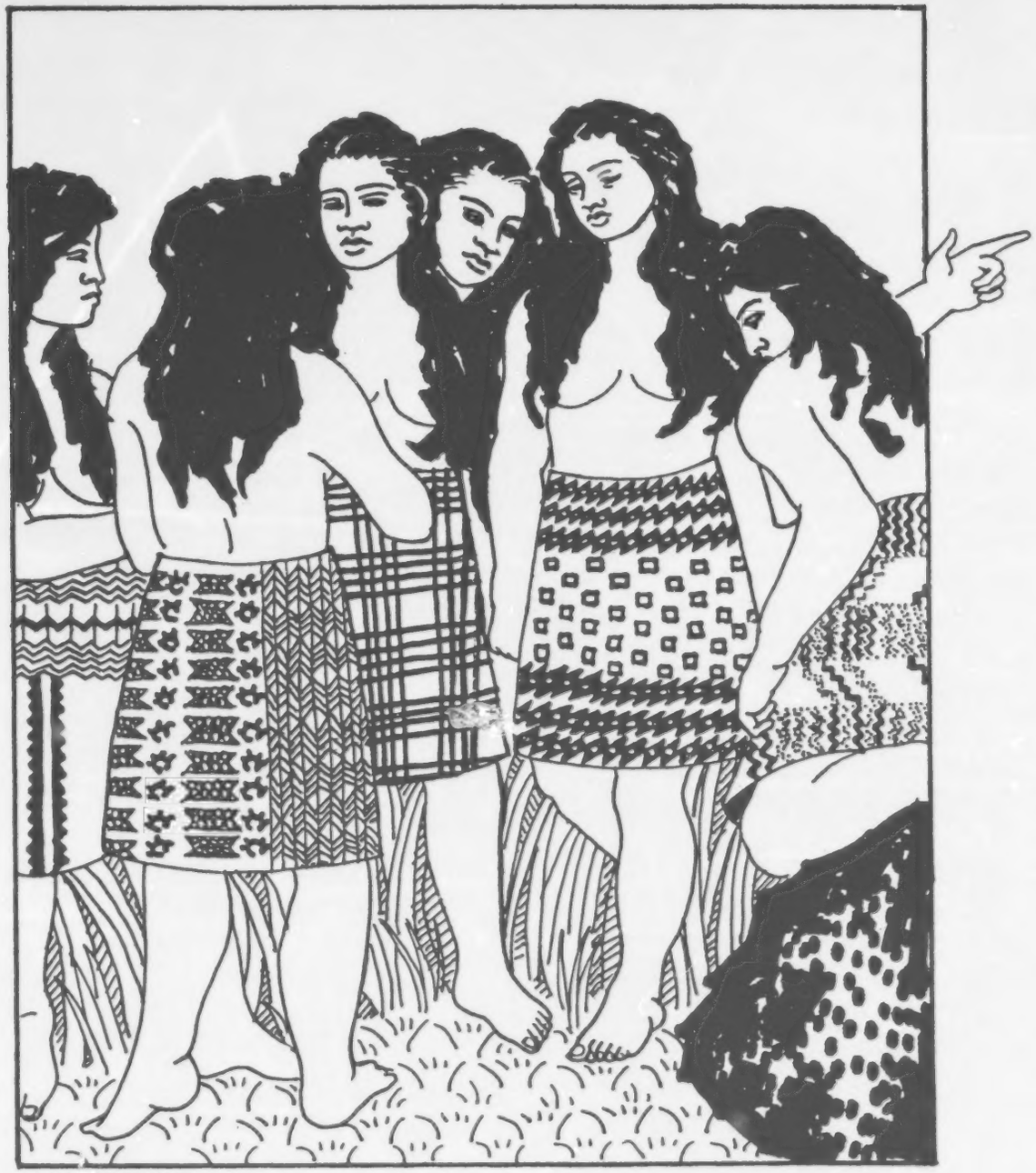
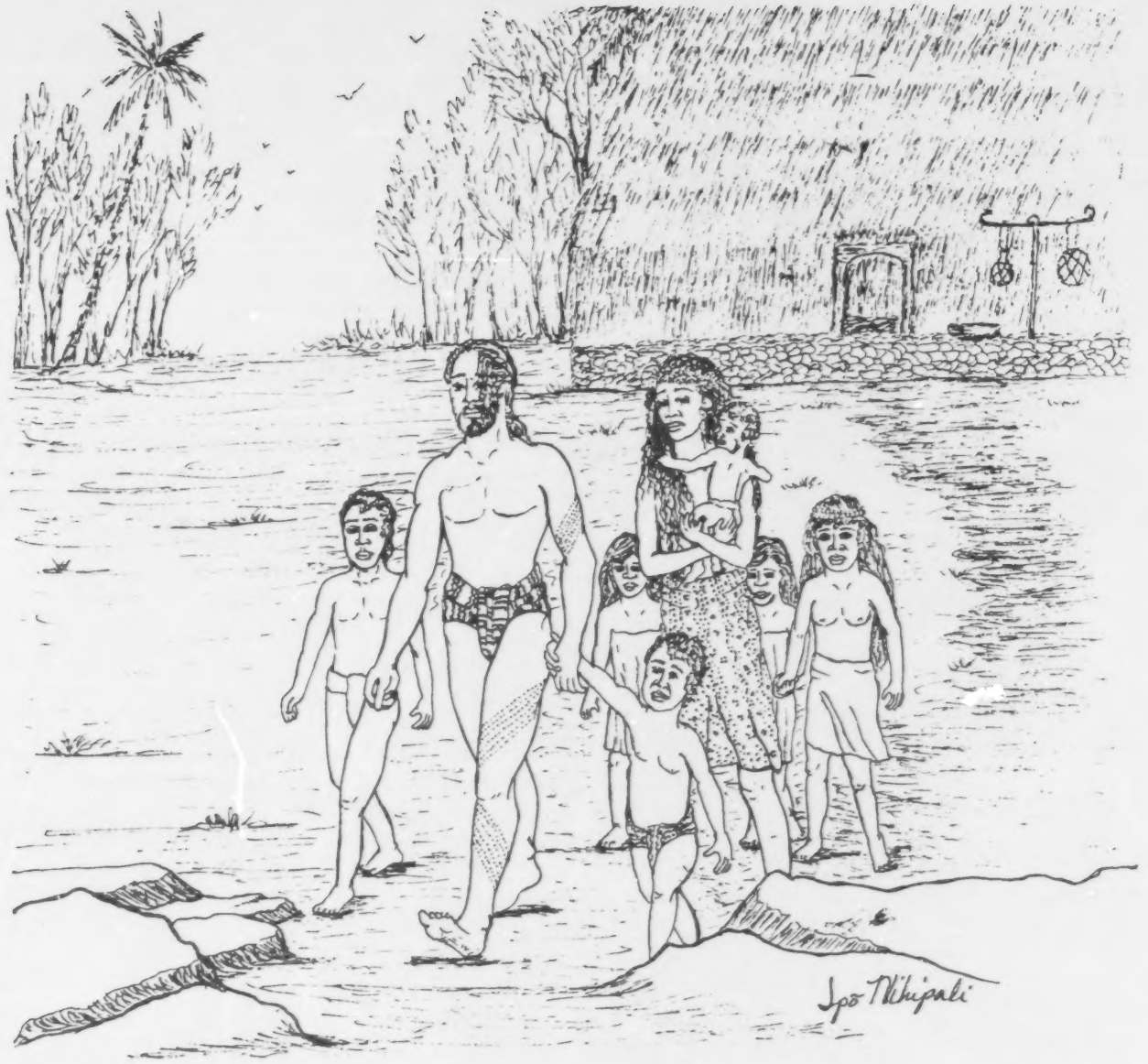
"Anelike"

DOE/OIS. Nā Ka'ao Kāhiko, p. 244

The sisters of Anelike are all outfitted in pā'ū which have been dyed, stamped and decorated with various kinds of geometric designs.

One can see the typical style of dress for women in early Hawai'i--a wrap-around garment extending from the waist to the knees with no covering above the waist.





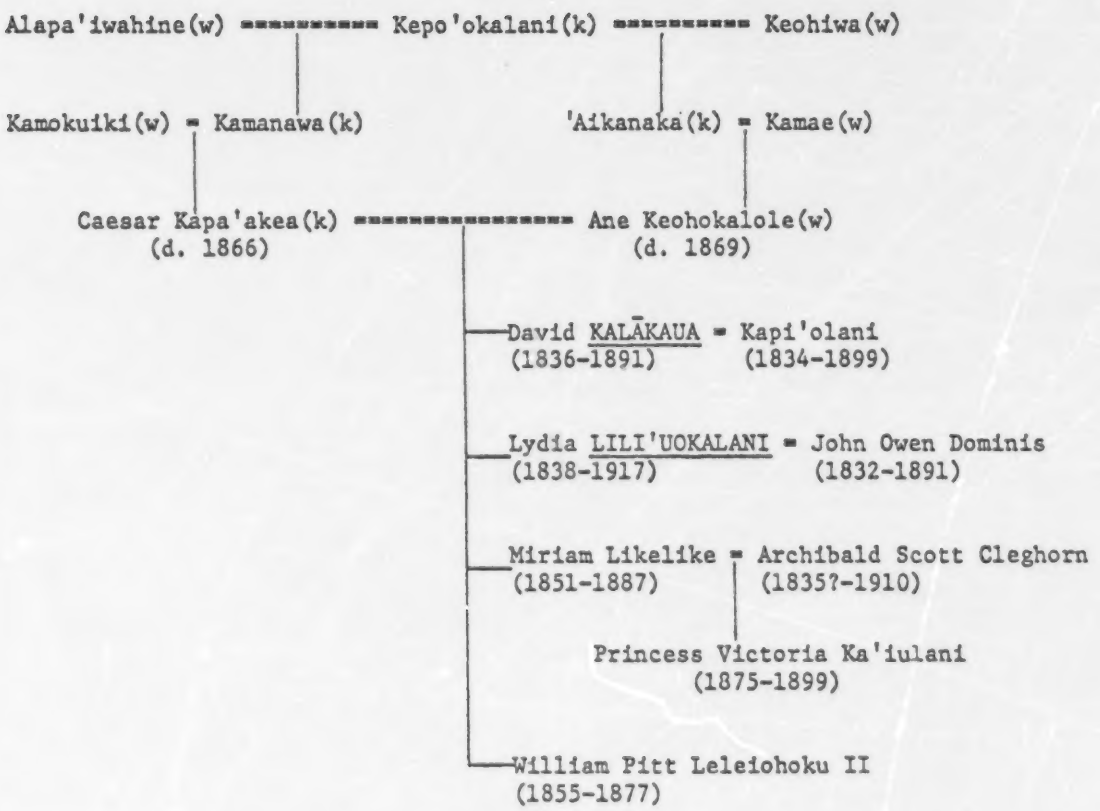
"Ke Kumu 'Ulu/The Breadfruit Tree"

DOE/OIS. Nā Ka'ao Kāhiko, p. 12

In this picture, Kū is seen walking with his family. His wife is wearing a pā'ū, a wrap-around cloth garment similar to a lavalava or a pareu. It generally covered the woman or young girl's body from the waist to the knees, thus keeping the thigh area modestly covered.

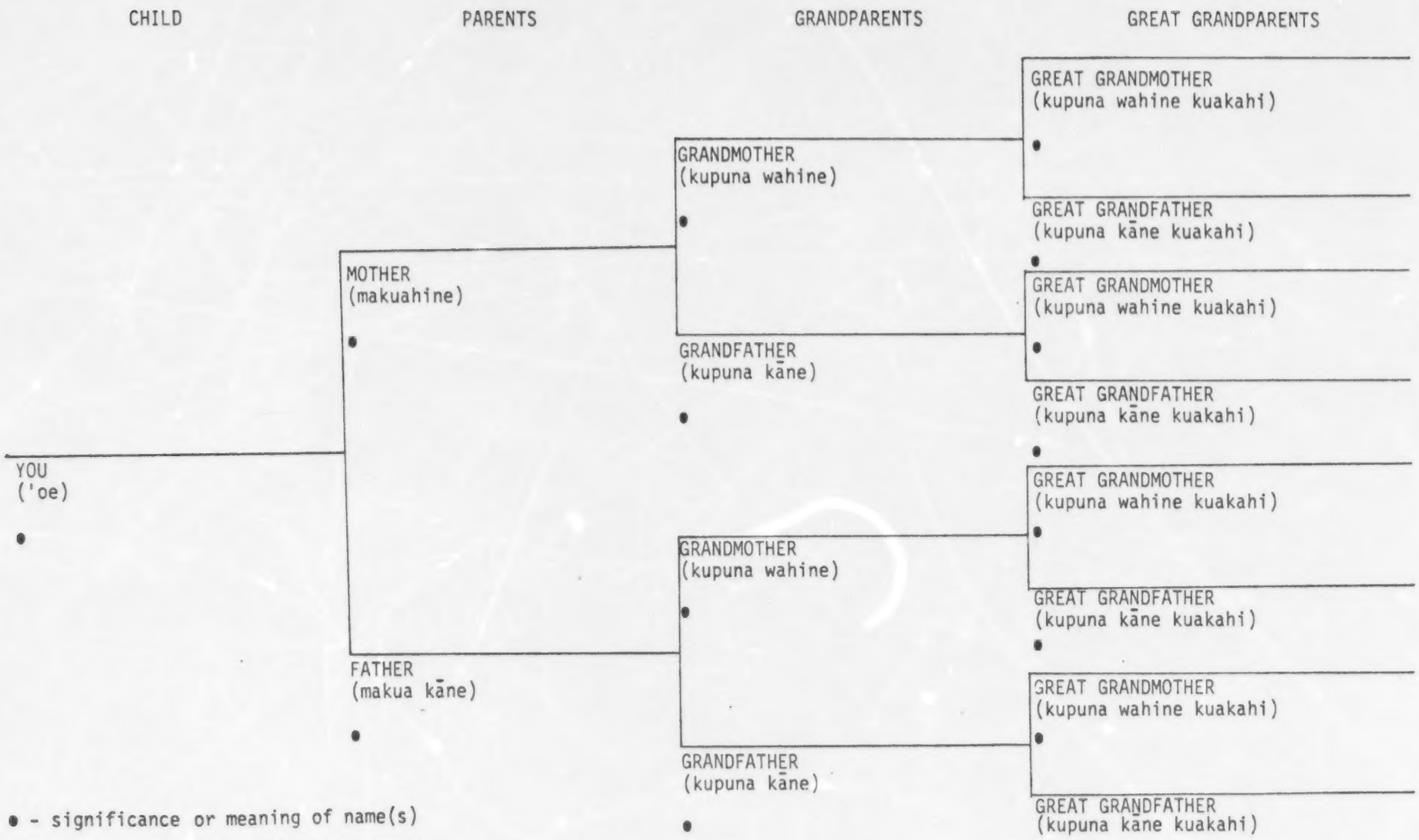
The male members of the family are wearing malo, a type of loincloth. Generally, young boys did not begin to wear the malo until they were about five or six.

Mo'okū'auhau o Kalākaua


Alapa'iwahine(w) = Kepo'okalani(k) = Keohiwa(w)
Kamokuiki(w) = Kamanawa(k)
'Aikanaka(k) = Kamae(w)
Caesar Kapa'akea(k) (d. 1866) = Ane Keohokalole(w) (d. 1869)
David KALĀKAUA (1836-1891) = Kapi'olani (1834-1899)
Lydia LILI'UOKALANI (1838-1917) = John Owen Dominis (1832-1891)
Miriam Likelike (1851-1887) = Archibald Scott Cleghorn (1835?-1910)
Princess Victoria Ka'iulani (1875-1899)
William Pitt Leleiohoku II (1855-1877)

Key:	(k) kāne (husband)	(w) wahine (wife)	(=) married	|children	Ruling monarchs underlined

Genealogy Chart



• - significance or meaning of name(s)

Prepared by: Mikihala Hall St. Laurent

NĀ KUMU OLA O HAWAI'I
The Life Giving Sources of Hawai'i

Kāhea: 'Ae, Nā kumu ola o Hawai'i

1. Aia i ka lani (lā)	There in the heavens
Ka ua ola o ka 'āina	The life-giving rain of the land
2. Eia ka 'āina (lā)	Here is the land
Uluwehi i ka lau lā'au	The forests thrive
3. 'Au aku i ke kai (lā)	Sailing upon the sea
Huaka'i hele ma ka wa'a	Traveling by canoe
4. 'O Hawai'i ke kanaka (lā)	Hawai'i is a person.
Mālama 'ia e nā pua	Cared for by the people
5. Puana ko'u mele (lā)	Tell my story
Nā kumu ola o Hawai'i	The life-giving sources of Hawai'i

Kāhea: He mele no nā kumu ola o Hawai'i

Basic Ipu Patterns:

kū	=	thump
pa'i	=	slap
pā	=	thump-slap
kahela	=	thump-slap-slap
kūkū	=	thump-thump-thump-slap-slap

366

Composed by Nu'ulani Atkins and Holoua Stender

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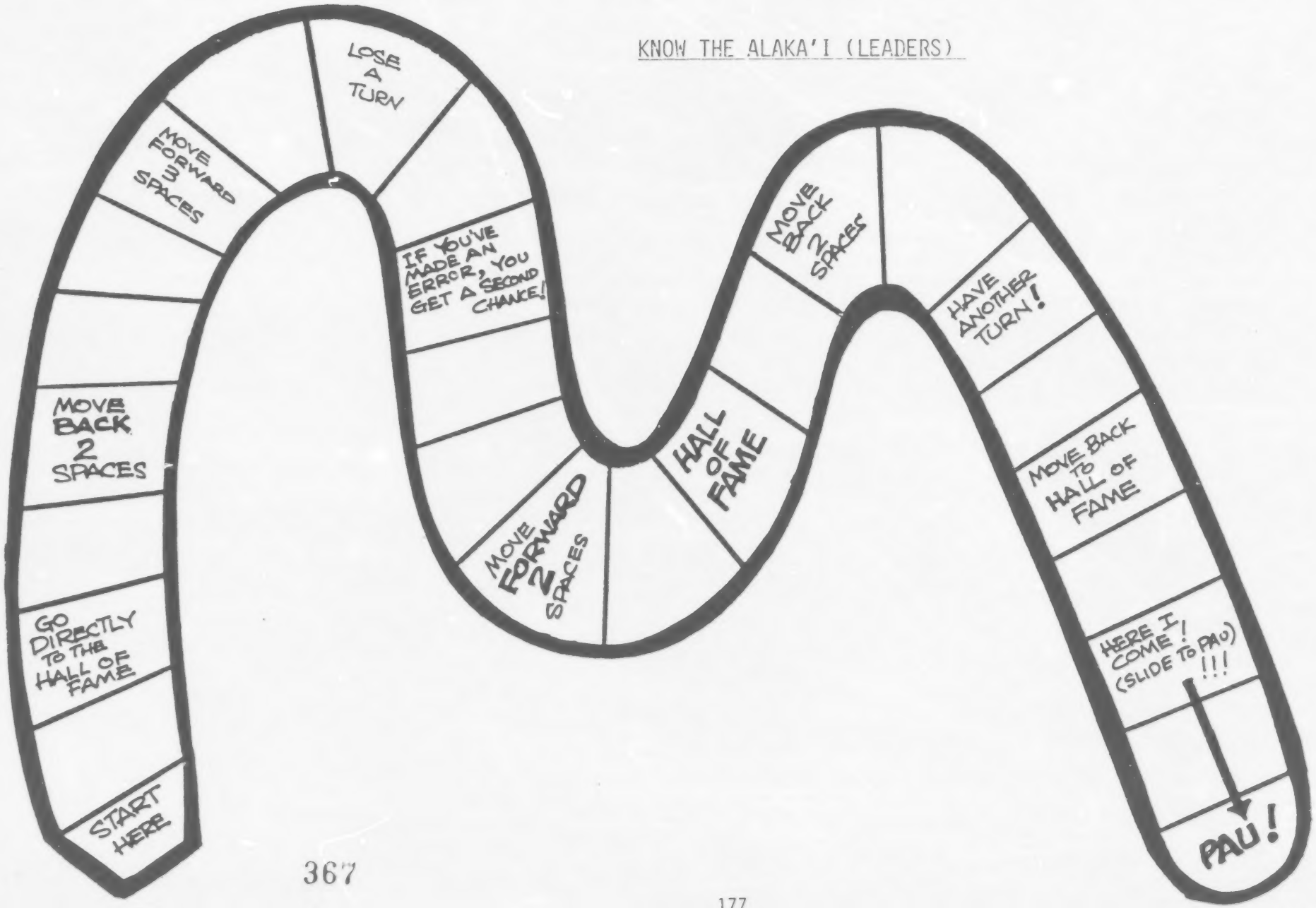
KNOW THE ALAKA'I (LEADERS)


START HERE
GO DIRECTLY TO THE HALL OF FAME
MOVE BACK 2 SPACES
MOVE FORWARD 3 SPACES
LOSE A TURN
IF YOU'VE MADE AN ERROR, YOU GET A SECOND CHANCE!
MOVE FORWARD 2 SPACES
HALL OF FAME
MOVE BACK 2 SPACES
HAVE ANOTHER TURN!
MOVE BACK TO HALL OF FAME
HERE I COME! (SLIDE TO PAU) !!!
PAU!

Summary of the legend, "The Flying War Club"

Palili was part man, part spirit, who was raised by his kahu (guardian), Makua, at a temple of the gods, Alanāpō. His kahu had taught him all there was to know about using the newa (war club). As he wearied of the practice and drilling, he pleaded with his kahu to permit him to go out in the world and use the knowledge which he had gained. Makua released him to go out and do good with his skill, "Use your skill for good, not evil. Help the good resist the evil."

If he twirled his magic war club, it would transport him to wherever he wished to go. If he used it in a good cause, it would surely bring him victory.

His first adventures were on O'ahu where the High Chief Ahuapau was of such high kapu that the lā (sun) could not shine upon him, the ua (rain) not fall upon him, nor the makani (wind) blow upon him. His noble wāwae (feet) could not be allowed to touch the ground so he was carried everywhere in a manele (a covered litter).

The chief went thus throughout the island of O'ahu except in the districts of 'Ewa and Ko'olau. Since there was pilikia in those two districts, Ahuapau asked Palila to go first to 'Ewa to discover the reason for the disappearance of so many of his po'e kānaka (people).

In a clever manner, Palila found out that there was a shark-man posing as a farmer who was killing and eating swimmers. Through the kōkua of the konohiki (overseer) of the district, Palila put the shark-man into a position where he was forced to remove his kīhei (shoulder cape) and thus expose his shark teeth on his back. The Shark-Man of 'Ewa was quickly dispatched by the other men and Palila returned to Ahuapau to report his success.

After receiving the offer of either of the chief's daughters, Palila declined because he wished to go on more adventures before settling down. He was then sent to Ko'olau where he battled the fearsome Olomano. (This is the spelling used in this story although most legends concerning Palila speak of his fight with Olomana which is the name of the small mountain in Kailua to the east of the Kawainui marsh.) (Although this legend does not mention it, Palila was reared on Kaua'i.) He taunted the giant Olomano who was 36 feet tall and as broad as a house. Twirling his club, he jumped up on Olomano's po'ohiwi (shoulder), chanted his identity and struck Olomano on the po'o (head), cleaving him in two.

Upon returning and seeing how vain Ahuapau truly was, Palila went off to Hawai'i and offered his services to the underdog in the war between the chiefs of Hilo and Hāmākua. He suggested that his ali'i, the chief of Hilo, challenge the chief of Hāmākua to a fight of the best warrior from each side, winner take all. The chief of Hāmākua sent his undefeated team to fight Palila. They were the renowned Three Warriors of Hāmākua but Palila just yawned and looked bored when they were introduced. The First Warrior twirled a gigantic knobbed newa (war club) the like of which no one had ever seen. The Second Warrior brandished a pololū (long spear) of tremendous proportions which reputedly pierced a rain cloud once and flooded the island. The Third Warrior jabbed and thrusted with a wicked ihe (short spear). It was said that his ihe had torn the great hole in the cliff at Onomea. Palila killed all three plus their ali'i thus ending his adventures in this story.

Thompson, Vivian L. Hawaiian Tales of Heroes and Champions (Illustrated by Herbert Kawainui Kane), Holiday House, New York, 1971, pp. 19-28.

Language Patterns

He + Noun

He pattern	A pattern
He kuahiwi	A mountain
He pali	A cliff
He kualapa	A ridge
He pōhaku	A rock
He kumulā'au	A tree

He + Noun + Demonstrative

He ___N___ kēia.

He aha kēia?	What is this?
He kuahiwi kēia.	This is a mountain.
(A mountain this is)	
He pali kēia.	This is a cliff.
He kualapa kēia.	This is a ridge.
He pōhaku kēia.	This is a rock.
He kumulā'au kēia.	This is a tree.

He + Noun + Adjective + Demonstrative

He ___N___ ___adj___ kēia.

He kuahiwi ki'eki'e kēia.	This is a high mountain.
(A mountain high this is)	
He kuahiwi nui kēia.	This is a big mountain.
He kuahiwi ulīuli kēia.	This is a green mountain.
He kuahiwi nani kēia.	This is a beautiful mountain.
He pali kūnihi kēia.	This is a steep cliff.
He pali nihoa kēia.	This is a jagged cliff.

HAWAIIAN STUDIES PROGRAM

BASIC HAWAIIAN VOCABULARY LISTS, GRADES K-2

The Basic Vocabulary Lists which follow contain Hawaiian words which range from very basic and culturally important terms to more general ones identifying early and modern Hawaiian and imported values, practices, objects and people. The words have been drawn from the Basic Hawaiian Vocabulary Lists, #'s 1 and 2 which were reprinted in Appendix D, Hawaiian Studies Program Guide (Draft), Office of Instructional Services/General Education Branch, RS 81-0655, March 1981. The two lists were created for all learners of Hawaiian at the elementary level, whether they be in elementary school, high school, college or adult school, by Haunani Bernardino, Dr. Emily 'Ioli'i Hawkins, and Robert Lokomaika'iokalani Snakenberg.

After using the lists during the 1981-82 school year in the implementation of the Hawaiian Studies Program, District Resource Teachers and kupuna suggested that the two lists be regrouped to reflect more explicitly the vocabulary which would be appropriate for each grade level from kindergarten to sixth. The following lists are the results of a series of meetings held in the Fall of 1982. The Department acknowledges the kōkua of and expresses "Mahalo nui loa!" to the following:

Honolulu District	Solomon Kaulukukui and Kupuna Katherine Makena Harbottle
Central District	Jan Kahōkū Yoneda
Leeward District	Mililani Allen and Kupuna Elizabeth Kauahipaula
Windward District	Elsie Kawao Durante, Kupuna Jessie Pi'imauna and Kupuna Lilia Hale
State Office	Noelani Māhoe and Lokomaika'iokalani Snakenberg

These lists are constructed so that the words are grouped in categories such as social life and relations, nature, food, body parts, etc. Within each category, the words are glossed following the order of the sounds in the Hawaiian alphabet, the Pī'āpā. Words beginning with the glottal stop or 'okina (') are to be found after the words beginning with the other consonants.

The alphabetical order followed, therefore, is: a, e, i, o, u, h, k, l, m, n, p, w, 'a, 'e, 'i, 'o, 'u

This arrangement in Hawaiian alphabetical order is being applied only to initial vowels and consonants (including the 'okina) and is being done to underscore the importance of the 'okina in both pronunciation and spelling. It also serves to help the learner memorize which words begin with the 'okina by having them physically separated from the words spelled with the same initial vowel.

Social Life & Relations - Plural forms

kaikamāhine	girls/daughters
kānaka	persons, people
kūpuna	grandparents
mākua	parents
wāhine	women

Nature

honua	land, earth
kuahiwi	mountain
kumu lā'au	tree
lā'au	bush, tree, herb medicine
lau	leaf
pali	cliff
'āina	land, earth

Hawaii Lifestyle (hula, music, arts/crafts, games/sports)

lei	garland; to put on a garland

Food

inu	to drink
kālua	to steam in imu

Body Part and Functions

kīkala	hip
ku'eku'e lima	elbow
ku'ekue' wāwae	ankle
kuli	knee
lauoho	hair
lehelehe	lip
manamana lima	finger
manamana wāwae	toe
niho	teeth
papakole	buttock
pāpālina	cheek
umauma	chest
'ūhā	thigh

Household Terms

kukui	light, lamp
moe	bed
pahu 'ume	drawer, bureau

Miscellaneous Verbs

helu	to count
hō'ike	to show
komo	to enter
'ōlelo	to speak

Miscellaneous Adjectives

pilikia	trouble

Miscellaneous

mea	thing, person

Numbers

0-19

iwākalua	twenty

Decades; concept of kana-

kanakolu	thirty
kanaha	forty
kanalima	fifty
kanaono	sixty
kanahiku	seventy
kanawalu	eighty
kanaiwa	ninety

Kana is a prefix which indicates that it multiplies the base work (kolu, hā, etc.)

Ho'okahi (one, alone, one of something as opposed to one in a series)	exposure
ho'okahi kāma'a	(just) one shoe
ho'okahi wa'a	(only) one canoe

* Hawaiianized English

Days of Week

See K-1	exposure

Months

See K-1	exposure

Clothing

kāma'a	shoe
lole wāwae	pants
mu'umu'u	loose gown
pālule	shirt
pāpale	hat

Animals

See K-1	exposure

Transportation

*ka'a	car
wa'a	canoe

mākaukau	prepared, ready
nani	beautiful, pretty
nui	big, plenty, many, much
pau	finished, consumed, destroyed
piha	full
wela	hot

Colors

hinahina	gray
ke'oke'o	white
melemele	yellow (golden)
*palaunu	brown
*polū	blue
poni	purple
'ākala	pink
'alani	orange
'ele'ele	black
'ōma'oma'o	green
'ula'ula	red

School

*kula	school
kumu kula	school teacher
noho	chair
puka	door; hole through something

Days of the Week Exposure

Pō'akahi	Monday
Pō'alua	Tuesday
Pō'akolu	Wednesday
Pō'ahā	Thursday
Pō'alima	Friday
Pō'aono	Saturday
Lāpule	Sunday

*Months Exposure

Kepakemapa	September
'Okakopa	October
Nowemapa	November
Kekemapa	December
'Ianuali	January
Pepeluali	February
Malaki	March
'Apelila	April
Mei	May
Iune	June
Iulai	July
'Aukake	August

* Hawaiianized English

Social Life & Relations

inoa	name
kaikamahine	girl, daughter
kamaiki/*pēpē	baby
kāne	man, husband
keiki	child
keiki kāne	boy, son
kupuna	grandparent
kupuna wahine/kupuna kāne	grandmother/grandfather
makua	parent
makua kāne/makuahine	father/mother
wahine	woman, wife
'ohana	family

Nature

ahiahi	evening
ānuenue	rainbow
awakea	mid-day
hōkū	star
kahakai	beach
kai	sea, salty water
kakahiaka	morning
lā	day; sun
lani	heaven(ly); chief(ly)
mahina	moon
makani	wind
manu	bird
pō	night, darkness
pōhaku	rock, stone
pua	flower, descendant
wai	fresh, non-salty liquid
'auinalā	afternoon
'uku	louse, flea

Hawai'i Lifestyle (hula, music, arts/crafts, games/sports)

aloha	love; to greet
hula	dance; to dance
kapu	rules/laws; sacred
kōkua	help; to help
mahalo	thanks; to thank; to admire/like

Food

i'a	fish
kalo	taro
moa	chicken
pā'ina	to dine
poi	mashed kalo, 'uala, or 'ulu
pua'a	pig
'ai	to eat; also sometimes used as the general word for the staples kalo, taro, or poi

* Hawaiianized English

'īlio	dog
'ono	tasty, delicious

Body Parts

ihu	nose
kino	body
lima	hand, arm
maka	eye
pepeiao	ear
piko	navel
po'o	head
po'ohiwi	shoulder
waha	mouth
wāwae	foot, leg
'ōpū	stomach

Household Terms

hale	house
*home	home
lānai	patio
lua	toilet
*lumi	room
noho	chair
pākaukau	table

* Hawaiianized English

puka	door; hole through something
puka aniani	window

Miscellaneous Verbs

hana	to work, to make, to do
hele mai	to come
hele aku	to go (away)
hiamoe	to sleep
holo	to go, run, sail
ho'olohe	to listen
ho'omākaukau	to prepare, make ready
kāhea	to call
kū	to stand
lele	to jump, fly
nānā	to look (at)
noho	to sit

Miscellaneous Adjectives

akamai	smart, intelligent, clever
anuanu	cold
hau'oli	happy, glad, content
hou	new
li'ili'i	small
loa	long, very
lō'ihi	long
maika'i	good

Animals

*hiṛa	sheep
honu	turtle
i'a	fish
*kakā	duck
kao	goat
*lāpaki	rabbit
lio	horse
manu	bird
moa	chicken
*pelehū	turkey
pipi	beef, cattle
pōpoki	cat
pua'a	pig
pueo	owl
'ekake/kekake	donkey
'īlio	dog

Numbers

0-19; concept of -kūmā-/-kumama-

0	'ole
1	'ekahi
2	'elua
3	'ekolu
4	'ehā
5	'elima
6	'eono
7	'ehiku
8	'ewalu
9	'eiwa
10	'umi
11	'umikūmākahi
12	'umikūmālua
13	'umikūmākolu
14	'umikūmāhā
15	'umikūmālima
16	'umikūmāono
17	'umikūmāhiku
18	'umikūmāwalu
19	'umikūmāiwa

NOTE: In modern secular use from 11 through 99, the numbers involving units one through nine are formed by using the appropriate tens number with the infix, "-kūmā-," and then the particular unit number; e.g., eleven is ten plus one, 'umi-kūmā-kahi.

In the older form, the Hawaiians used the infix, "-kumama- " Some kupuna, especially those still active in Hawaiian churches where the Hawaiian Bible is read out loud, may prefer the older form. The children should be exposed to both forms but they should concentrate on learning to use the modern form actively.

* Hawaiianized English

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331

330

SONGS AND CHANTS

TITLE/TRANSLATION	COMPOSER	PAGE	SUBJECT	SOURCE
'Ā-Aloha Mai	Haunani Bernardino	21-23	Aloha	p. 51
Aloha 'Oe (Farewell to You)	Lili'uokalani	115	Aloha	Nā Mele O Hawai'i Nei (NM), pp. 35-36
'Āinahau (Hau Tree Land)	Likelike	111-115	Estate of Ka'iulani	E Hīmeni Hawai'i Kākou (EHHK), p. 6
E Manono	Traditional	119-121	Wife of Kekuaokalani who dies at his side during the battle of Kuamo'o	Hawai'i Music Program (HMP), Zone 1-Book A, pp. 90-91
Eia Mākou Nā Mahi'ai (Here We Are The Farmers)	Māhela Rosehill	11-15	Farmers	p. 46
Hawai'i's Greetings	Dorothy Gillett	23-25	Greetings-morning/noon/night	HMP, Zonel-Book B, p. 154
Hawai'i Pono'ī	Kalākaua/Berger	115	Hawai'i's anthem	Music Comprehensive Musicianship Program, Gr. 6, p. 2
Hawaiian Rough Riders	Traditional	107	Cowboys	NM, pp. 42-43.
He Kino Maika'i Nō (A Fine Body)	Hawaiian Studies State Staff	9	Body parts	p. 47
Huki I Ke Kalo (Pull the Taro)	Harriet Ne	101-103	Taro harvesting/preparation	p. 155
Kanaka Mahi'ai (The Farmer)	Ralph Alapa'i	15-17	Farmers	p. 15
Ka'uiki (The Glimmer)	Traditional	81-85	Fortress Hill in Hāna, Maui	p. 165
Ke Ao Nani/Nani Ke Ao Nei (The Beautiful World)	Kawena Pūku'i	93-94	Environmental awareness	HMP, Zone 1-Book B, pp. 146-149 Hawaiiana Aloha Council, Boy Scouts of America, pp. 140-142.
Koni Au (I Thirst)	Kalākaua	101	Royal water	King, Charles E. King's Book of Hawaiian Melodies (KBMH), p. 67

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Makalapua (Profuse Bloom)	Traditional	115-119	In honor of Lili'uokalani	King, Charles E. King's Songs of Hawai'i, pp. 112-113
Mele Pā'ani E (Game Song)	Katherine Maunakea	17-19	Directions using the body	EHHK, pp. 90-91.
Nā Kumu Ola O Hawai'i (The Life Giving Sources of Hawai'i)	Nu'ulani Atkins and Holoua Stender	103-107	Sources of life	p. 176
Nā Māhele O Ke Kino (Parts of the Body)	Explorations Staff	9-11	Body parts	p. 48
Nā Moku 'Ehā (The Four Islands)	J. Kealoha	85	Hawai'i, Maui, O'ahu, Kaua'i	KBHM, p. 80
Nā 'Oihana Like 'Ole (Various Occupations)	Hawaiian Studies State Staff	49-50	Occupations	p. 49-50
Paniolo Country (Cowboy Country)	Marcus Schutte, Jr.	111	Cowboys	Melveen Leed's Grand Ole Hawaiian Music Nashville Style, LP, Lehua Records, SL 7053 Paniolo Country, LP, J-San Records, JSR-1974, Gabe Kila and the Nānākuli Sons
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